Medical Student Mock Interviews to Improve Residency Interviewing and Match Success

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ABSTRACT

Purpose: Using a quasi-experimental approach, we examined student and faculty satisfaction with a mock residency interview program. We also examined whether self-selected participants had match rates that differed from nonparticipants.

Methods: Interviews were arranged on a specified evening between students and a physician in the specialty to which the student wished to apply. Interviews were structured as similarly to residency interviews as possible, but included 10 minutes of verbal feedback and subsequent written feedback to all students. Students completed surveys indicating their satisfaction with the mock interview immediately following the interview and 5 months later (after their actual resident interviews). Faculty feedback to students and their satisfaction with the program also was collected. Out of 189 (55%) students in the senior class, 104 volunteered to participate.

Results: Immediately following the mock interview, over 90% of students who participated either strongly agreed or agreed that the interview feedback was helpful, seemed realistic, and helped them identify strengths and weaknesses. Responses collected 5 months later were still favorable, but less positive. Faculty identified 7 students who they believed had poor interview techniques and an additional 13 who interviewers believed would be unlikely to match in their specialty. Final match results for the group participating in the mock interview showed a primary match rate of 99%, which was higher than students who did not participate (94%, $P < .001$).

Conclusion: In a self-selected group of students who chose to participate, mock interviews were useful in improving student match success compared to students who did not participate in the mock interview program. Because all students were not required to participate, it is unclear whether this tactic would be successful for all students.

INTRODUCTION

As a response to predictions of future physician shortages, in 2006 the Association of American Medical Colleges called for medical schools in the United States to increase their enrollment by 30%.[1] Medical schools have risen to that challenge by expanding class sizes and adding regional campuses.[2] According to data from the National Residency Match Program,[3,4] between 2005 and 2014 the number of US allopathic medical school seniors participating in the match has grown from 14,709 to 17,374, an increase of 18%. While the increase of 2665 graduating seniors is sizeable, these students represent only about a third of the overall growth in noninternational applicants attempting to secure residency training positions through the annual match process. Over the same time period, the number of prior US allopathic medical school graduates re-entering the match has increased by 30%, while US osteopathic graduates participating in the match has increased by 80%. The largest growth in match participants is among US citizens who attend international medical schools. This pool of applicants grew by 3045 between 2005 and 2014, an increase of 145% and nearly 400 more than the absolute growth in US allopathic medical school seniors over the same time period.

While the number of medical school graduates has increased substantially over the past 10 years, the number of residency slots has not kept pace. In 2004, there were 24,012 residency positions in the United States.[5] In 2014, this grew to 30,212.[6] As a result, in the 2015 residency match there were 41,334 registered applicants competing for one of the 30,212 available positions. In short, the match has become highly competitive due to forces that are largely outside students' control.

Personal interviews and interpersonal skills are considered highly important in evaluating residency applicants. According to a survey of nearly 1800 residency directors, interactions with faculty during the interview and visit and interactions with house staff during the interview and visit were the first and third most commonly cited factors, respectively, in evaluating a candidate.[7]

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These responses suggest that assisting students in improving their interview skills could favorably influence their chances at securing a position through the match. Despite the personal interview being a vital step in the consideration of residency applicants, rarely do medical schools engage in any formal preparation of students for this activity. In our review of the literature, we were not able to identify any previous studies or even descriptions of such a program.

At the Medical College of Wisconsin, we implemented a mock residency interview program in 2014 to assess students' interviewing skills and provide targeted feedback both on interviewing techniques and competitiveness for a specific discipline identified by the student. The mock interview program was voluntary, paired students with a faculty member in a specialty that they identified as their first choice, and provided timely feedback to students. This paper describes the experiences of the students and faculty members during these interviews and provides data on the match success of students who chose to participate.

METHODS

Study Sample

Students participating in the mock interview sessions were members of the fourth-year class at the Medical College of Wisconsin in August 2014. Students were contacted by e-mail and asked if they wished to participate in a mock residency interview to be held in September 2014. Students also were asked for their preferred medical specialty so that they could be matched to a physician from that discipline who was knowledgeable about residency selection criteria.

Faculty members who had experience interviewing residency candidates for their specialty's training program were recruited to perform the interviews. Faculty members were recruited selectively from the same specialty areas that students indicated an interest in pursuing so that students could be matched with someone familiar with the student's intended field. Other than refreshments, faculty members were provided no incentive to participate. There were no incentives provided for students.

This project was reviewed and approved by the Medical College of Wisconsin Human Subjects Committee.

Intervention

Mock interviews were conducted in the evenings to minimize any conflicts with students' clinical education responsibilities. Students were paired with a faculty member in their preferred specialty, although in 4 cases this was not possible and a physician from a related specialty conducted the interview. Students were instructed to bring their medical school transcript, personal statement, and a draft of their medical school performance evaluation (dean's letter) for review by their interviewer.

Interviews were scheduled to last 20 minutes, with an additional 10 minutes for direct feedback to the student. Faculty members were given 5 minutes to review the documents related to their student prior to the interview. Faculty members were given no specific questions or protocol for the interview; they were asked to interview the student who was applying for a position in their own program.

Measures

To assess initial satisfaction with the program, students were asked to complete a paper questionnaire distributed to them immediately following their interview. At this time, students had received verbal feedback from faculty members, but had not been given written feedback. In addition, a follow-up questionnaire was distributed via e-mail using a Web-based survey tool in January 2015, after the students completed their actual residency interviews. Both questionnaires asked the students whether they believed the interview helped them identify their strengths and weaknesses, whether the faculty feedback was helpful, and whether the interview seemed realistic. The first questionnaire also asked whether the interview helped assess their competitiveness for that specialty, while the follow-up questionnaire asked if students had used the interview to help decide their specialty choice. Students also were asked about their satisfaction with the process, and whether they would recommend it to students the following year.

In addition to providing verbal feedback, faculty members completed an assessment form after each interview. Faculty members were asked to assess the student's interviewing skills on a 4-point Likert scale (ranging from 1 = poor to 4 = excellent) as well as predict where the student would likely be ranked on his or her residency program's rank order list. For the rank order question, faculty members were given choices of "top third," "middle third," "bottom third," "unlikely to be on list," and "unlikely to obtain an interview." Faculty also provided an estimate of where on their rank list their residency program usually filled given choices of "top third of list," "middle third," "ranked anywhere on list," and "good chance to obtain spot in Supplemental Offer and Acceptance Program® (SOAP)." This allowed us to assess the student's likely competitiveness based on where the faculty member felt they would fall on their program's list compared to where they usually matched.

Student match success for students who participated in the mock interview program and those who did not was obtained through the results of the National Residency Match Program in March 2015, as well as early match data from the military, ophthalmology, and urology matches in January/February 2015.

Analyses

Student and faculty survey responses were analyzed using simple descriptive statistics. For faculty member assessments of competi-

Table 1. Student Evaluations of the Mock Interview Program

	September 2014 Following interview (N = 93)	January 2015 After residency interviews (N = 49)
Mock Interview Helped Identify Strengths and Weaknesses		
Strongly agreed	74 (79.6%)	23 (46.9%)
Agreed	19 (20.4%)	25 (51.0%)
Disagreed	0	1 (2%)
Strongly disagreed	0	0
Interview Feedback Was Helpful		
Strongly agreed	83 (89.3%)	26 (53.1%)
Agreed	10 (10.8%)	22 (46.9%)
Disagreed	0	1 (2%)
Strongly disagreed	0	0
Interview Seemed/Was Realistic		
Strongly agreed	64 (68.8%)	21 (42.9%)
Agreed	28 (30.1%)	23 (46.9%)
Disagreed	1 (1%)	3 (6.1%)
Strongly disagreed	0	2 (4.1%)
Mock Interview Helped Assess Competitiveness for Selected Area		
Strongly agreed	54 (58.1%)	Not asked
Agreed	28 (30.1%)	Not asked
Disagreed	11 (11.8%)	Not asked
Strongly disagreed	0	Not asked
Mock Interview Helped Me Decide Which Specialty to Apply to[a]		
Strongly agreed	Not asked	9 (19.1%)
Agreed	Not asked	5 (10.6%)
Disagreed	Not asked	27 (57.4%)
Strongly disagreed	Not asked	6 (12.8%)
Would Recommend to Next Year's Students[a]		
Strongly agreed	86 (92.5%)	20 (44.4%)
Agreed	7 (7.5%)	15 (33.3%)
Disagreed	0	9 (20.4%)
Strongly disagreed	0	1 (2.2%)

[a]Not all students provided an answer to this question.

Table 2. Faculty Interviewer Assessments of Student Interview Skills

	N (%)
Assessment of Student Interviewing Skills	
Excellent: no further practice needed	35 (41%)
Good: would benefit from practice	43 (51%)
Fair: definitely needs coaching and feedback	6 (7%)
Poor: if not improved, will hurt chances of match	1 (1%)
Would Recommend to Next Year's Students	
Strongly agreed	61 (82.4%)
Agreed	13 (17.6%)
Disagreed	0
Strongly disagreed	0
Based on Record and Interview, Student Likely to Match in That Specialty	
Alignment between program and student on rank list	70 (84%)
Non-alignment between program and student on rank list	13 (16%)

tiveness, students who fell within the usual rank list parameters identified by a faculty member were deemed to have a high likelihood of matching; those who a faculty member felt would not match based on their prediction of where they would be ranked were considered at high risk of not matching.

For match rates based on participation, the proportion of those obtaining a position in the initial match (ie, prior to SOAP) was compared for those who participated in the mock interview program with those who did not using chi-square analysis.

RESULTS

A total of 189 students were eligible for the mock interviews, and of these 104 participated (55%). Of the students who participated in the mock interview process, 93 (89%) returned surveys after the initial interview. Forty-nine (49%) completed the follow-up interview in January. As shown in Table 1, students' responses were very positive immediately following the mock interview. Students strongly agreed that fourth-year students in the subsequent class should participate in the program. When surveyed after completing their actual residency interviews, student responses were still positive, although less positive than in their initial responses. Although the total number of students who "strongly agreed" and "agreed" were about the same for many questions, there were many more responses in the latter category than immediately after their interview. Additionally, following their residency interviews, almost a quarter of students said they would not recommend this program for students in the following year.

A total of 93 (89%) faculty members returned their assessments following the interviews (Table 2). Like the students, faculty members immediately following the interviews would recommend this experience to students in subsequent years. Additionally, faculty identified 7 students whose interviewing skills were rated as fair or poor and who would benefit from coaching and practice before participating in their actual interviews. Based on faculty members' predictions of where students would rank and where their own program usually went on their match list, we also identified an additional 13 students who would be predicted not to match based on where faculty members felt they would be ranked.

Finally, we examined the success at an initial match for students who participated in the program compared to those who elected not to participate. Of those students who did mock match interviews, 1 student out of the 104 did not have an initial match (1%). For the 85 students who did not participate, 8 did not match (9%, $P<.001$) when compared to program participants. Because the faculty comments were de-identified, we could not assess whether this student was judged to be at risk based on his or her interview.

DISCUSSION

These data suggest that a mock interview experience for students will help identify those students who may need additional coaching or mentoring when interviewing for residency positions, and

could improve their chances of successfully matching. A small number of students who did not perform well on their interviews were identified by faculty members, as well as a larger set of students who did not appear to be competitive for a residency spot in a specific specialty. Based on these predictions alone, it would be anticipated that up to 20 students would have difficulty with their interview process and be at high risk of not matching. This suggests that students were able to improve their interview skills and/or shift their specialty choices to improve their match success.

The data also show that the group that participated in the mock match interview matched at a rate higher than those who elected not to participate. Some of this may have been feedback provided during or after the mock interview, but the difference in success rates also could be influenced by volunteer bias. Students who took the time to participate in the mock match program may have been more motivated to succeed than the students who chose not to invest the time in this session. It should be noted, though, that several students who failed to participate had expressed a desire to have a mock interview, but were unable because of scheduling conflicts, including many who were engaged in out-of-town rotations. Finally, it also is possible that our instrument overestimated the risk that students would not match, so this group are "false positives." Additional data with more students in a situation where we could track the predictions and outcomes of individual students would be helpful.

Our results also demonstrate that the program was well received by students and faculty members. Nearly all participants agreed that future student classes should participate in a similar program, although after their real-life residency interview experiences, the students' recommendations were less positive. In reviewing student comments provided in the follow-up phase of the survey, many suggested that the mock interview was more intense than their actual interviews.

While supportive of a mock match program, the results should be interpreted in light of several limitations. First, the participants were self-selected, which may have produced volunteer bias resulting in a qualitative difference between participants and nonparticipants. Secondly, predictions regarding students' risks of not matching may not be as robust as those during an actual interview because the opinion was based on a single evaluator rather than an entire residency program team. Finally, the follow-up comments from students in January may have been affected by both volunteer and recall bias.

Overall, these preliminary results suggest a value in providing mock match interview experiences for our students. Future applications of the program might benefit from a requirement of the exercise and more structure in both interview and feedback from faculty.

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