

Teaching Housestaff to Enhance Student Education With the Use of Fantasy Sports (THESEUS)

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Medical students receive their clinical training from a variety of sources, including residents, during informal teaching sessions, and attending physicians, during more formalized rounds. As managed-care has reduced the amount of time available for teaching, medical schools are emphasizing clinical experience over lectures (1). With this, the role of the resident as a teacher has increased.

Wilson (2) reports that medical students receive 20%–70% of their teaching from residents, and it is estimated by Weissman (3) that residents contribute to one-third of medical students' knowledge. It is also well-documented that an effective resident teacher can influence the future career choice of a medical student (4, 5). Moreover, there is evidence that better resident teachers can help students become better learners (6), and that resident teaching can improve residents' clinical skills (7).

Despite these benefits, many residents shy away from teaching. According to Morrison and Haffler (6), one possible reason for this is that residents undervalue teaching. Wilson (2) also reports that obstacles to resident teaching include the lack of recognition of teaching efforts, the lack of role-modeling by faculty, the lack of knowledge of teaching objectives, and the lack of resident interest. In an interview of 10 experienced medical teachers, it appeared that receiving encouragement to teach was a common point in their acquisition of teaching skills (8). In fact, Katz and McCarty (9) report that an incentive-based pilot program to encourage residents to teach had positive results on residents' participation and enthusiasm. Similarly, a program at Northwestern University Medical School that rewards faculty with points for teaching has resulted in increased faculty morale (10).

In considering an innovative way to construct our system of rewards, we decided to adopt a fantasy-football model. This model allows for friendly competition among residents,

as two teams are matched up head-to-head. Another reason to use a fantasy-football format is the enjoyment value, as evidenced by its popularity. With about 30 million people age 12 and over in the United States and Canada playing fantasy sports, the franchise generates \$3–\$4 billion in revenue per year (11). The industry is growing at a rate between 7% and 10% per year. We hypothesized that because sports are generally popular, this appeal would generalize to the residents. The “Teaching Housestaff to Enhance Student Education with the Use of fantasy Sports” (THESEUS) program focused on improving residents' attitudes and motivation to teach medical students. This project aimed to eliminate many of the barriers to resident teaching. It provided three key elements that research has shown to be seminal in encouraging resident teaching: providing role-modeling, clear objectives, and recognition of teaching efforts.

Method

Each 6-week psychiatry clerkship during the students' third year of medical school is set up as a fantasy-football game in which teams comprising three or four residents compete against each other to accumulate the most points over the 6-week rotation. Each clerkship objective has an attached point-total that is awarded to a “team” when that objective (e.g., teaching a mental status exam) is taught or reviewed by a resident. Awards may be 2, 3, or 7 points, depending on level of complexity. Each team is “owned” by a faculty member in the department who has been identified as a role model for teaching. It was hypothesized that motivation to teach and confidence of residents to teach will be increased through this intervention of friendly competition. Essential components of this project include associating residents' names with faculty members held in high regard and recognizing effective resident teachers. To test the hypothesis, all 24 residents were asked to fill out short surveys before and after the academic year. The pre-intervention surveys contained 10 questions, several of which assess residents' motivation to teach, their confidence in their teaching abilities, and enjoyment of teaching (see Table 1). These questions were not standardized items to gauge constructs of teaching confidence, motivation, or enjoyment; rather, they were evaluator-generated. The post-intervention surveys included two additional questions, assessing residents' perceptions about the project. Average Likert scores were compared pre- and post-intervention to determine whether participation in THESEUS affects residents'

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TABLE 1. Likert-Type Questions**Confidence in Teaching Abilities**

1. I am comfortable teaching medical students.
2. My knowledge-base is adequate to supervise and teach students.
3. I possess the proper skills (e.g., performing a mental status examination) in order to effectively model and teach students.
4. I am confident in my role as teacher.

Motivation to Teach

1. I am motivated to teach medical students.

Enjoyment in Teaching

1. Medical student teaching is an important aspect of my resident training.
2. Teaching medical students is an enjoyable aspect of my residency.
3. Teaching medical students is a rewarding experience.

motivation to teach. Also, feedback was obtained from medical students at the end of their rotations to identify effective resident teachers, who were then recognized with a plaque at the end of the academic year.

Results

Whereas all 24 residents participated in the “games,” 19 residents completed the surveys (of a total of 22 residents), a response rate of 86%. Preliminary data indicate that residents’ confidence in their teaching improved by participating in THESEUS, suggesting that teaching may have beneficial effects on residents’ self-perception of their teaching skills. Markers of confidence improved from an average of 2.58 to 3.44 on a 5-point Likert scale (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree). However, early data do not show any effects on residents’ overall motivation to teach. It is also pertinent to note that, on average, residents found this to be an enjoyable activity.

Conclusions

With increasing demands placed on academic medicine, creative approaches implemented into residency training are needed to ensure that residents are motivated to teach medical students. Literature addressing this concern has been able to identify some of the barriers to residents’ teaching of medical students. Our project aimed to create an atmosphere of friendly competition, while trying to minimize some of the identified barriers to resident teaching. Although there was a trend toward increased confidence in teaching among residents, a potential confounding variable

is time spent in residency; that is, one would expect residents’ teaching confidence to increase after a year of residency. Furthermore, a similar trend was not observed with regard to the residents’ motivation to teach. The motivation for the residents included their teaching efforts’ being operationalized by points. Given that residents are matched up in a head-to-head competition, the total number of points they achieve will be interpreted relative to their peers. This friendly competition was hypothesized to motivate residents’ teaching efforts. There are several reasons for the results on motivation. First, residents did not have access to their performance results. This has recently been addressed with the creation of our website (<http://rwjpsych-fantasyfootball.org/>), where points are collectively (as a team) recorded and posted every 3 weeks (“half-time” and “final” scores). Our methods may lack construct validity. The authors elected to use author-generated measures in lieu of validated measures for ease of administration. Although the single-item question may have been adequate for our quality-improvement project, it was likely insufficient for measuring our outcomes and contributed to the negative finding that THESEUS did not increase residents’ motivation to teach.

Another major weaknesses of the project was the small sample size. More data are needed to determine whether participation in THESEUS results in a statistically significant increase in residents’ confidence in their teaching ability or their overall motivation to teach. The project is ongoing, and more data will be analyzed at the end of the 2008–2009 academic year. One possibility for the expansion of the project is the inclusion of a control group, such as a matched group of residents who did not receive the intervention. A control group assessed at the start and end of the year just as those in the experimental group would address concerns pertaining to time in residency as a confounding variable. Other possibilities for expansion include assessing for a correlation between 1) medical student ratings of residents’ teaching abilities and residents’ confidence with teaching; and 2) medical student ratings of residents’ teaching abilities and residents’ motivation to teach. It would also be worthwhile to note any gender differences in perceived effectiveness of this “fantasy-football” model of enhancing motivation to teach.

Ultimately, we hope to create a model that will help residents overcome some of the existing barriers to teaching medical students. This, we believe, will help to improve teaching and supervision of medical students, foster a passion for learning and teaching among residents, and enhance medical student interest in psychiatry as a career.

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