

ORIGINAL RESEARCH

Faculty Development for Hospitalists: Structured Peer Observation of Teaching

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BACKGROUND: Hospitalists provide much of the clinical teaching in internal medicine, yet formative feedback to improve their teaching is rare.

METHODS: We developed a peer observation, assessment, and feedback program to improve attending hospitalist teaching. Participants were trained to identify 10 optimal teaching behaviors using a structured observation tool that was developed from the validated Stanford Faculty Development Program clinical teaching framework. Participants joined year-long feedback dyads and engaged in peer observation and feedback on teaching. Pre- and post-program surveys assessed confidence in teaching, performance of teaching behaviors, confidence in giving and receiving feedback, attitudes toward peer observation, and overall satisfaction with the program.

RESULTS: Twenty-two attending hospitalists participated, averaging 2.2 years (\pm 2.1 years standard deviation [SD])

experience; 15 (68%) completed pre- and post-program surveys. Confidence in giving feedback, receiving feedback, and teaching efficacy increased (1 = strongly disagree, 5 = strongly agree, mean \pm SD): "I can accurately assess my colleagues' teaching skills," (pre = 3.2 ± 0.9 vs post = 4.1 ± 0.6 , $P < 0.01$), "I can give accurate feedback to my colleagues" (pre = 3.4 ± 0.6 vs post = 4.2 ± 0.6 , $P < 0.01$), and "I am confident in my ability to teach students and residents" (pre = 3.2 ± 0.9 vs post = 3.7 ± 0.8 , $P = 0.026$).

CONCLUSIONS: Peer observation and feedback of teaching increases hospitalist confidence in several domains that are essential for optimizing teaching. Further studies are needed to examine if educational outcomes are improved by this program. *Journal of Hospital Medicine* 2014;9:244–250. © 2014 Society of Hospital Medicine

Hospitalists are increasingly responsible for educating students and housestaff in internal medicine.¹ Because the quality of teaching is an important factor in learning,^{2–4} leaders in medical education have expressed concern over the rapid shift of teaching responsibilities to this new group of educators.^{5–8} Moreover, recent changes in duty hour restrictions have strained both student and resident education,^{9,10} necessitating the optimization of inpatient teaching.^{11,12} Many hospitalists have recently finished residency and have not had formal training in clinical teaching. Collectively, most hospital medicine groups are early in their careers, have significant clinical obligations,¹³ and may not have the bandwidth or expertise to provide faculty development for improving clinical teaching.

Rationally designed and theoretically sound faculty development to improve inpatient clinical teaching is required to meet this challenge. There are a limited number of reports describing faculty development

focused on strengthening the teaching of hospitalists, and only 3 utilized direct observation and feedback, 1 of which involved peer observation in the clinical setting.^{14–16} This 2011 report described a narrative method of peer observation and feedback but did not assess for efficacy of the program.¹⁶ To our knowledge, there have been no studies of structured peer observation and feedback to optimize hospitalist attendings' teaching which have evaluated the efficacy of the intervention.

We developed a faculty development program based on peer observation and feedback based on actual teaching practices, using structured feedback anchored in validated and observable measures of effective teaching. We hypothesized that participation in the program would increase confidence in key teaching skills, increase confidence in the ability to give and receive peer feedback, and strengthen attitudes toward peer observation and feedback.

METHODS

Subjects and Setting

The study was conducted at a 570-bed academic, tertiary care medical center affiliated with an internal medicine residency program of 180 housestaff. Internal medicine ward attendings rotate during 2-week blocks, and are asked to give formal teaching rounds 3 or 4 times a week (these sessions are distinct from teaching which may happen while rounding on patients). Ward teams are composed of 1 senior

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resident, 2 interns, and 1 to 2 medical students. The majority of internal medicine ward attendings are hospitalist faculty, hospital medicine fellows, or medicine chief residents. Because outpatient general internists and subspecialists only occasionally attend on the wards, we refer to ward attendings as attending hospitalists in this article. All attending hospitalists were eligible to participate if they attended on the wards at least twice during the academic year. The institutional review board at the University of California, San Francisco approved this study.

Theoretical Framework

We reviewed the literature to optimize our program in 3 conceptual domains: (1) overall structure of the program, (2) definition of effective teaching and (3) effective delivery of feedback.

Over-reliance on didactics that are disconnected from the work environment is a weakness of traditional faculty development. Individuals may attempt to apply what they have learned, but receiving feedback on their actual workplace practices may be difficult. A recent perspective responds to this fragmentation by conceptualizing faculty development as embedded in both a “faculty development community” and a “workplace community.” This model emphasizes translating what faculty have learned in the classroom into practice, and highlights the importance of coaching in the workplace.¹⁷ In accordance with this framework, we designed our program to reach beyond isolated workshops to effectively penetrate the workplace community.

We selected the Stanford Faculty Development Program (SFDP) framework for optimal clinical teaching as our model for recognizing and improving teaching skills. The SFDP was developed as a theory-based intensive feedback method to improve teaching skills,^{18,19} and has been shown to improve teaching in the ambulatory²⁰ and inpatient settings.^{21,22} In this widely disseminated framework,^{23,24} excellent clinical teaching is grounded in optimizing observable behaviors organized around 7 domains.¹⁸ A 26-item instrument to evaluate clinical teaching (SFDP-26) has been developed based on this framework²⁵ and has been validated in multiple settings.^{26,27} High-quality teaching, as defined by the SFDP framework, has been correlated with improved educational outcomes in internal medicine clerkship students.⁴

Feedback is crucial to optimizing teaching,^{28–30} particularly when it incorporates consultation³¹ and narrative comments.³² Peer feedback has several advantages over feedback from learners or from other non-peer observers (such as supervisors or other evaluators). First, the observers benefit by gaining insight into their own weaknesses and potential areas for growth as teachers.^{33,34} Additionally, collegial observation and feedback may promote supportive teaching relationships between faculty.³⁵ Furthermore, peer

review overcomes the biases that may be present in learner evaluations.³⁶ We established a 3-stage feedback technique based on a previously described method.³⁷ In the first step, the observer elicits self-appraisal from the speaker. Next, the observer provides specific, behaviorally anchored feedback in the form of 3 reinforcing comments and 2 constructive comments. Finally, the observer elicits a reflection on the feedback and helps develop a plan to improve teaching in future opportunities. We used a dyad model (paired participants repeatedly observe and give feedback to each other) to support mutual benefit and reciprocity between attendings.

Intervention

Using a modified Delphi approach, 5 medical education experts selected the 10 items that are most easily observable and salient to formal attending teaching rounds from the SFDP-26 teaching assessment tool. A structured observation form was created, which included a checklist of the 10 selected items, space for note taking, and a template for narrative feedback (Figure 1).

We introduced the SFDP framework during a 2-hour initial training session. Participants watched videos of teaching, learned to identify the 10 selected teaching behaviors, developed appropriate constructive and reinforcing comments, and practiced giving and receiving peer feedback.

Dyads were created on the basis of predetermined attending schedules. Participants were asked to observe and be observed twice during attending teaching rounds over the course of the academic year. Attending teaching rounds were defined as any pre-planned didactic activity for ward teams. The structured observation forms were returned to the study coordinators after the observer had given feedback to the presenter. A copy of the feedback without the observer’s notes was also given to each speaker. At the midpoint of the academic year, a refresher session was offered to reinforce those teaching behaviors that were the least frequently performed to date. All participants received a \$50.00 Amazon.com gift card, and additional gift card incentives were offered to the dyads that first completed both observations.

Measurements and Data Collection

Participants were given a pre- and post-program survey. The surveys included questions assessing confidence in ability to give feedback, receive feedback without feeling defensive, and teach effectively, as well as attitudes toward peer observation. The post-program survey was administered at the end of the year and additionally assessed the self-rated performance of the 10 selected teaching behaviors. A retrospective pre- and post-program assessment was used for this outcome, because this method can be more reliable when participants initially may not have sufficient insight to accurately assess their own

Observer: _____ Speaker: _____ Date: _____

<p>Positive learning climate</p> <ul style="list-style-type: none"> Listened to learners. Encouraged learners to participate actively in the discussion. 	<p><u>Take notes on this side (not for the speaker):</u></p>
<p>Control of session</p> <ul style="list-style-type: none"> Called attention to time. 	
<p>Communicating goals</p> <ul style="list-style-type: none"> Stated goals clearly and concisely. Stated relevance of goals to learners. 	
<p>Promoting understanding and retention</p> <ul style="list-style-type: none"> Presented well organized material. Used blackboard or other visual aids. 	
<p>Evaluating learners</p> <ul style="list-style-type: none"> Evaluated learners' ability to apply medical knowledge to specific patients. 	
<p>Providing feedback</p> <ul style="list-style-type: none"> Explained to learners why he/she was correct or incorrect. 	
<p>Promoting self-directed learning</p> <ul style="list-style-type: none"> Motivated learners to learn on their own 	

FIG. 1. Structured observation form, side 1. See "Intervention" for discussion.

competence in specific measures.²¹ The post-program survey also included 4 questions assessing satisfaction with aspects of the program. All questions were structured as statements to which the respondent indicated degree of agreement using a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. Structured observation forms used by participants were collected throughout the year to assess frequency of performance of the 10 selected teaching behaviors.

Statistical Analysis

We only analyzed the pre- and post-program surveys that could be matched using anonymous identifiers provided by participants. For both prospective and retrospective measures, mean values and standard deviations were calculated. Wilcoxon signed rank tests for nonparametric data were performed to obtain *P* values. For all comparisons, a *P* value of <0.05 was considered significant. All comparisons were performed using Stata version 10 (StataCorp, College Station, TX).

RESULTS

Participant Characteristics and Participation in Program

Of the 37 eligible attending hospitalists, 22 (59%) enrolled. Fourteen were hospital medicine faculty, 6 were hospital medicine fellows, and 2 were internal

medicine chief residents. The average \pm standard deviation (SD) number of years as a ward attending was 2.2 years \pm 2.1. Seventeen (77%) reported previously having been observed and given feedback by a colleague, and 9 (41%) reported previously observing a colleague for the purpose of giving feedback.

All 22 participants attended 1 of 2, 2-hour training sessions. Ten participants attended an hour-long mid-year refresher session. A total of 19 observation and feedback sessions took place; 15 of them occurred in the first half of the academic year. Fifteen attending hospitalists participated in at least 1 observed teaching session. Of the 11 dyads, 6 completed at least 1 observation of each other. Two dyads performed 2 observations of each other.

Fifteen participants (68% of those enrolled) completed both the pre- and post-program surveys. Among these respondents, the average number of years attending was 2.9 \pm 2.2 years. Eight (53%) reported previously having been observed and given feedback by a colleague, and 7 (47%) reported previously observing a colleague for the purpose of giving feedback. For this subset of participants, the average \pm SD frequency of being observed during the program was 1.3 \pm 0.7, and observing was 1.1 \pm 0.8.

Observer: _____ Speaker: _____ Date: _____

	Place a check mark if present	√	Notes for the speaker
Positive learning climate	Listened to learners.		<p>Reinforcing comments:</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>Constructive comments:</p> <p>1.</p> <p>2.</p>
	Encouraged learners to participate actively in the discussion.		
Control of session	Called attention to time.		
Communicating goals	Stated goals clearly and concisely.		
	Stated relevance of goals to learners.		
Promoting understanding and retention	Presented well organized material.		
	Used blackboard or other visual aids.		
Evaluating learners	Evaluated learners' ability to apply medical knowledge to specific patients.		
Providing feedback	Explained to learners why he/she was correct or incorrect.		
Promoting self-directed learning	Motivated learners to learn on their own.		

FIG. 1. Structured observation form, side 2. See "Intervention" for discussion.

Confidence in Ability to Give Feedback, Receive Feedback, and Teach Effectively

In comparison of pre- and post-intervention measures, participants indicated increased confidence in their ability to evaluate their colleagues and provide feedback in all domains queried. Participants also indicated increased confidence in the efficacy of their feedback to improve their colleagues' teaching skills. Participating in the program did not significantly change pre-intervention levels of confidence in ability to receive feedback without being defensive or confidence in ability to use feedback to improve teaching skills (Table 1).

Self-Rated Performance of 10 Selected Teaching Behaviors

In retrospective assessment, participants felt that their performance had improved in all 10 teaching behaviors after the intervention. This perceived improvement reached statistical significance in 8 of the 10 selected behaviors (Table 2).

Attitudes Toward Peer Observation and Feedback

There were no significant changes in attitudes toward observation and feedback on teaching. A strong pre-program belief that observation and feedback can improve teaching skills increased slightly, but not sig-

nificantly, after the program. Participants remained largely neutral in expectation of discomfort with giving or receiving peer feedback. Prior to the program, there was a slight tendency to believe that observation and feedback is more effective when done by more skilled and experienced colleagues; this belief diminished, but not significantly (Table 3).

Program Evaluation

There were a variable number of responses to the program evaluation questions. The majority of participants found the program to be very beneficial (1 = strongly disagree, 5 = strongly agree [n, mean ± SD]): "My teaching has improved as a result of this program" (n = 14, 4.9 ± 0.3). Both giving (n = 11, 4.2 ± 1.6) and receiving (n = 13, 4.6 ± 1.1) feedback were felt to have improved teaching skills. There was strong agreement from respondents that they would participate in the program in the future: "I am likely to participate in this program in the future" (n = 12, 4.6 ± 0.9).

DISCUSSION

Previous studies have shown that teaching skills are unlikely to improve without feedback,²⁸⁻³⁰ yet feedback for hospitalists is usually limited to summative, end-rotation evaluations from learners, disconnected

TABLE 1. Confidence in Ability to Give Feedback, Receive Feedback, and Teach Effectively Pre- and Post-intervention.

Statement	Mean Pre	SD	Mean Post	SD	P
I can accurately assess my colleagues' teaching skills.	3.20	0.86	4.07	0.59	0.004
I can give accurate feedback to my colleagues regarding their teaching skills.	3.40	0.63	4.20	0.56	0.002
I can give feedback in a way that that my colleague will not feel defensive about their teaching skills.	3.60	0.63	4.20	0.56	0.046
My feedback will improve my colleagues' teaching skills.	3.40	0.51	3.93	0.59	0.011
I can receive feedback from a colleague without being defensive about my teaching skills.	3.87	0.92	4.27	0.59	0.156
I can use feedback from a colleague to improve my teaching skills.	4.33	0.82	4.47	0.64	0.607
I am confident in my ability to teach students and residents during "attending rounds.*"	3.21	0.89	3.71	0.83	0.026
I am confident in my knowledge of components of effective teaching.*	3.21	0.89	3.71	0.99	0.035
Learners regard me as an effective teacher.*	3.14	0.66	3.64	0.74	0.033

NOTE: 1 = strongly disagree, 3 = neutral, 5 = strongly agree. N = 15 except where noted. Abbreviations: Post, post-intervention; Pre, pre-intervention; SD, standard deviation.

*N = 14.

TABLE 2. Retrospective Self-Appraisal of Competence in Selected Teaching Behaviors Pre- and Post-intervention.

SFDP Framework Category From Skeff et al. ¹⁸	"When I Give Attending Rounds, I Generally . . ."	Mean Pre	SD	Mean Post	SD	P
1. Establishing a positive learning climate	Listen to learners	4.27	0.59	4.53	0.52	0.046
	Encourage learners to participate actively in the discussion	4.07	0.70	4.60	0.51	0.009
2. Controlling the teaching session	Call attention to time	3.33	0.98	4.27	0.59	0.004
3. Communicating goals	State goals clearly and concisely	3.40	0.63	4.27	0.59	0.001
	State relevance of goals to learners	3.40	0.74	4.20	0.68	0.002
4. Promoting understanding and retention	Present well-organized material	3.87	0.64	4.07	0.70	0.083
	Use blackboard or other visual aids	4.27	0.88	4.47	0.74	0.158
5. Evaluating the learners	Evaluate learners' ability to apply medical knowledge to specific patients	3.33	0.98	4.00	0.76	0.005
6. Providing feedback to the learners	Explain to learners why he/she was correct or incorrect	3.47	1.13	4.13	0.64	0.009
7. Promoting self-directed learning	Motivate learners to learn on their own	3.20	0.86	3.73	0.70	0.005

NOTE: 1 = strongly disagree and 5 = strongly agree. N = 15. Abbreviations: Post, post-intervention; Pre, pre-intervention; SD, standard deviation; SFDP, Stanford Faculty Development Program

from the teaching encounter. Our theory-based, rationally designed peer observation and feedback program resulted in increased confidence in the ability to give feedback, receive feedback, and teach effectively. Participation did not result in negative attitudes toward giving and receiving feedback from colleagues. Participants self-reported increased performance of important teaching behaviors. Most participants rated the program very highly, and endorsed improved teaching skills as a result of the program.

Our experience provides several lessons for other groups considering the implementation of peer feedback to strengthen teaching. First, we suggest that hospitalist groups may expect variable degrees of par-

ticipation in a voluntary peer feedback program. In our program, 41% of eligible attendings did not participate. We did not specifically investigate why; we speculate that they may not have had the time, believed that their teaching skills were already strong, or they may have been daunted at the idea of peer review. It is also possible that participants were a self-selected group who were the most motivated to strengthen their teaching. Second, we note the steep decline in the number of observations in the second half of the year. Informal assessment for reasons for the drop-off suggested that after initial enthusiasm for the program, navigating the logistics of observing the same peer in the second half of the year proved to be

TABLE 3. Attitudes Toward Peer Observation and Feedback Pre- and Post-intervention.

Statement	Mean Pre	SD	Mean Post	SD	P
Being observed and receiving feedback can improve my teaching skills.	4.47	1.06	4.60	0.51	0.941
My teaching skills cannot improve without observation with feedback.	2.93	1.39	3.47	1.30	0.188
Observation with feedback is most effective when done by colleagues who are expert educators.	3.53	0.83	3.33	0.98	0.180
Observation with feedback is most effective when done by colleagues who have been teaching many years.	3.40	0.91	3.07	1.03	0.143
The thought of observing and giving feedback to my colleagues makes me uncomfortable.	3.13	0.92	3.00	1.13	0.565
The thought of being observed by a colleague and receiving feedback makes me uncomfortable.	3.20	0.94	3.27	1.22	0.747

NOTE: 1 = strongly disagree, 3 = neutral, 5 = strongly agree. N = 15. Abbreviations: Post, post-intervention; Pre, pre-intervention; SD, standard deviation.

prohibitive to many participants. Therefore, future versions of peer feedback programs may benefit from removing the dyad requirement and encouraging all participants to observe one another whenever possible.

With these lessons in mind, we believe that a peer observation program could be implemented by other hospital medicine groups. The program does not require extensive content expertise or senior faculty but does require engaged leadership and interested and motivated faculty. Groups could identify an individual in their group with an interest in clinical teaching who could then be responsible for creating the training session (materials available upon request). We believe that with only a small upfront investment, most hospital medicine groups could use this as a model to build a peer observation program aimed at improving clinical teaching.

Our study has several limitations. As noted above, our participation rate was 59%, and the number of participating attendings declined through the year. We did not examine whether our program resulted in advances in the knowledge, skills, or attitudes of the learners; because each attending teaching session was unique, it was not possible to measure changes in learner knowledge. Our primary outcome measures relied on self-assessment rather than higher order and more objective measures of teaching efficacy. Furthermore, our results may not be generalizable to other programs, given the heterogeneity in service structures and teaching practices across the country. This was an uncontrolled study; some of the outcomes may have naturally occurred independent of the intervention due to the natural evolution of clinical teaching. As with any educational intervention that integrates multiple strategies, we are not able to discern if the improved outcomes were the result of the initial didactic sessions, the refresher sessions, or the peer feedback itself. Serial assessments of frequency of teaching behaviors were not done due to the low number of observations in the second half of the program. Finally, our 10-item tool derived from the validated SFDP-26 tool is not itself a validated assessment of teaching.

We acknowledge that the increased confidence seen in our participants does not necessarily predict improved performance. Although increased confidence in core skills is a necessary step that can lead to changes in behavior, further studies are needed to determine whether the increase in faculty confidence that results from peer observation and feedback translates into improved educational outcomes.

The pressure on hospitalists to be excellent teachers is here to stay. Resources to train these faculty are scarce, yet we must prioritize faculty development in teaching to optimize the training of future physicians. Our data illustrate the benefits of peer observation and feedback. Hospitalist programs should consider

this option in addressing the professional development needs of their faculty.

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