Direct Observation of Faculty With Feedback: An Effective Means of Improving Patient-Centered and Learner-Centered Teaching Skills

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Background: *In 2002 Lehigh Valley Hospital and Health Network Internal Medicine residency program sought to establish a faculty development program for their teaching faculty that emphasized learner-centered teaching of patient-centered care.*
Description: *Medical educators trained in observational research practices shadowed teaching teams for 24 months and observed 24 General Internal Medicine faculty teach on inpatient rounds and provided timely written feedback to faculty. Within 48 hr, faculty received a completed Observation Feedback Sheet and summary comments.*
Evaluation: *Teaching skills were seen to improve over time after feedback was provided and repeat observations occurred. Observation ratings mirrored the results of the established Department of Medicine resident ranking of faculty teaching: Observed faculty receiving feedback improved their ranking, whereas faculty not observed did not.*
Conclusions: *Observation of teaching with written feedback is an effective means of individualizing faculty development and improving learner-centered[4] and microskill[7] teaching of patient-centered care.[8]*

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Clinical teachers face a particularly complex challenge meeting learners' needs in the midst of providing competent and attentive patient care. We define effective teachers as those who role model[1] quality evidence-based patient-centered care and facilitate active, experiential,[2] and reflective[3] learning by learners.[4] In addition, they establish a safe learning environment[5] conducive to learning by residents, students, and faculty involved; observe learner performance over time to judge learner competency; provide specific and constructive feedback;[6,7] and correct mistakes.[7] They teach and make explicit general rules of patient care,[7] doctor–patient communication, professionalism, and discipline-specific knowledge that are applicable to and appropriate for an individual patient's life context.[8]

Education is a major mission of both university hospitals and academic community hospitals, where most residency teaching occurs in an inpatient team setting. Recently, Graduate Medical Education (GME) mission statements have been calling for learner-centered teaching of patient-centered care. This mission includes the improvement of health care to practice evidence-based practice, to focus on professionalism, and to provide awareness of the need for and benefits of systems-based care. Traditionally, university hospitals, more than community teaching hospitals, have recognized the need for faculty development in advancing these GME goals.[9]

Peer review of teaching[10–12] is an accepted effective way of evaluating and improving teaching. Our teaching observation program moves beyond previous work by providing formative feedback[13,14] to faculty to promote self-reflection[15] about their teaching that leads to teaching improvement. The goal of this quality improvement program was to improve faculty teaching skills. Specifically, we chose three areas of focus: learner-centered teaching,[4] microskills,[7] and modeling patient-centered care.[8] Central to this program was timely delivery of feedback[16] to faculty in each of these skills. This article reports the implementation

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of a teaching observation with feedback program and the outcomes of this faculty development program.

Description

In late 2002, the Department of Medicine at Lehigh Valley Hospital in Allentown, Pennsylvania, decided to create and implement a faculty development program targeting the General Internal Medicine (GIM) division (51 faculty) with a twofold goal: (a) to reflect the mission of the Department of Medicine (DOM) to promote learner-centered teaching of patient-centered care and (b) to offer resources to help the faculty teach the six Accreditation Council of Graduate Medical Education Outcome Project competencies. The first two authors were recruited as educational consultants, not as faculty, and their time commitment to the project was .2 full-time equivalency each. Their respective credentials included being a Professor of Medicine MD, Ed.D., with 31 years of experience in medical education and an Assistant Professor with a Ph.D. and 10 years of experience in Health Communication. The implementation of the teaching observation faculty development (teaching quality improvement) program was sanctioned by the hospital's Internal Review Board and funded by the Dorothy Rider Pool Health Care Trust, a local trust whose mission is to improve the health of citizens in the Lehigh Valley.

In 2003, before teaching observations with written feedback occurred, the residency program director (WI) sent all the DOM teaching faculty a letter (a) describing the observation program, (b) describing its goal to help teachers learn to teach using learner-centered teaching[4] and microskills[7] and to model patient-centered care,[8] (c) providing a description of what each teaching skill involved, and (d) giving assurance that observers were participating in teaching rounds to observe faculty teaching skills only and not to assess faculty medical knowledge. In the first 2 to 3 months, observers (MRS and KH) together joined the inpatient team when teaching rounds began and used participant–observer qualitative ethnographic research techniques[17] to record field notes of the teaching process. Observations throughout the program lasted 60 to 150 min, depending on the length of teaching rounds and clinical context (e.g., conference schedules, patient codes, etc.) and averaged 94 min. Following rounds the observers met to discuss their notes and to come to consensus about what they had observed.

The residency program director selected the faculty to be observed, throughout the program's duration, by choosing those teaching faculty who were on-service at the time the observers were available. Faculty who did not want to be observed were not observed. Three faculty members who at first refused to participate later agreed to be observed during the project. During the beginning of the program, the goal was to observe as many of the teaching faculty as possible. Toward the end of the observation program (during the 2nd year), if all faculty teaching on the five inpatient services had already been observed, KH and MRS were asked to do repeat observations. Those teaching faculty who had more than one observation were the faculty members who taught most frequently (4–6 months per year) throughout the 2 years of the observation program. Repeat observations occurred 2 to 9 months after the prior observation, averaging 4.3 months later.

No written or oral feedback was given to the faculty observed during the first 2 to 3 months of the program as the observers worked on reducing observer variation to as close to zero as possible. Once observer variation disappeared, observations of teaching were performed by only one observer. To better organize observations, stay attentive to teaching process, and inform the faculty the specific behaviors we wanted to document and help teaching faculty to learn, KH developed an observation feedback sheet (OFS; see Figure 1). The sheet allowed the observer documentation, with examples, of what teaching skills were used and what patient-centered care was modeled by faculty. At first, it took days to return feedback to faculty as the observers learned to record observations and write-up constructive feedback. By the end of the 1st year of the observation program, writing up of feedback for faculty took an average of 2 hr and written feedback was sent to faculty within 48 hr, at first through interoffice mail and later electronically. During the 2nd year of the observation program, written feedback often was sent by e-mail to the observed teaching faculty member on the same day as the observation.

Following the first 5 faculty teaching observations, faculty received an OFS only. Beginning with the 6th observation, a written summary (Figure 2) of observations was added to improve feedback clarity and explanation because of questions from teaching faculty about the OFS ratings and the small amount of space available on the OFS for examples. The summary section (Figure 2) includes an overview of strengths and "areas for consideration" with emphasis on process description supported by specific examples. Rather than making specific suggestions, we kept recommendations to a minimum to provoke learner reflection about their performance. Our goal was to promote reflection and reflective learning rather than to score or rank teaching performance. Observations with written feedback continued through midyear 2005, during which time 37 observations providing feedback with an OFS and summary were returned to faculty. Hence a total of 42 observations of teaching with written feedback to teaching faculty occurred during the program: 5 observed faculty received OFS only, and 37 faculty received OFS and summary sheets.

Attending: Observer: MRS Total Time: 1.75 hours

A = Accomplished N = Not Seen or Not appropriate I = Improvement needed

	Learner-Centered Skills	Example
A	1. Create team contract	Expectations made clear for all of rds
A	2. Attending addresses members as individual and unique people	Called patients by Mr/Mrs surname
A	3. Attending is genuine	Shares frustration with addict patient
A	4. Attending create environment of respect and safeness	Very respectful of pts, H.S. ask questions
I	5. Attending confronts limitations of team member's perspectives	"Can we go back to neuro exam?'"
A	6. Attending challenges student to create new objectives for self	Asks student to read heroin effect on kidney
A/I	7. Attending shares excitement and/or personal reflections	He loves medicine, no personal reflections
A/I	8. Creates balance between active learning experience & reflection	Questions asked but not Why? No refection
I	9. Facilitates dialogic learning	Q's and answers, not real conversation
I	10. Facilitates self-reflective learning	No Q's "How might you do X better?"

	Microskills	
A	1. Get a commitment	Got H.S. to commit to Dx and plan
A/I	2. Probe for supporting evidence	Asks for reasoning & but no why?
A/I	3. Teach general rule & encourage use/refer to peer review lit.	Low pO2 should make think of PE , no EBM
A+	4. Reinforce what was done right	"you are really good at this" "Good [job/idea]
A	5. Correct mistakes	He has BPH—was rectal done?

	Patient-Centered Communication	Example
A	1. Greets patient by name	Yes, surnames with Mr./Mrs.
I	2. Asks patient permission for learners to observe	Told pts that whole team with her
A	3. Builds relationship w/patient & caretakers	Good listener and explainer in lay terms
I	4. Minimizes environmental distractions	No TV's turned off
A	5. Begins with open-ended questions	How are you doing?
A	6. Acknowledges pt.'s social context	Addict not working, no insurance
A	7. Acknowledges and responds to patient's nonverbal cues	Addict agitation and desperation noted
A	8. Acknowledges & responds to pt.'s verbal comments w/paraphrase and/or empathy	"Any pain?" "No" then cks with "No pain now?"
A	9. Asks permission to examine	Asks if he can do each part of exam
A	*10. Respects health beliefs and cultural and spiritual values	Belize Muslim pt's fear of nonauto-graft
A	11. Solicits pt.'s perspective and concerns	Asks all pts if any questions, concerns
A/I	*12. Protects pt.'s modesty (adjusts clothing)	Thanked resident for closing ICU curtain
A	13. Makes eye contact with patient	All patients
A/I	14. Engages in therapeutic touch	Touched arm of ICU patient with gloves on to examine
A	15. Engages pt. and family in education	Uses lay language to explain Dx and plan

* might not be relevant each time.

Figure 1. Observation feedback sheet for teaching skills during rounds.

Observations of GIMS Teaching: Dr. W, MD on May 25, 2004

I joined the team (three medical students—Temple, Hahneman and PSU, senior resident E and two interns, D and H) at 9 AM in the ED. During the 1.75 hours I observed, three patients were seen with 50 minutes spent on the complicated ICU patient (84 y/o male with hypoxemia, hypotension, fever, UTI, possible pneumonia, possible sepsis, leg ulcers and early bed sores) admitted during the night before rounds.

Strengths:
Dr. W was exceptionally good at letting house staff and students know when they did a good job (e.g., after D showed the team how to carefully move and position the ICU patient, Dr. W asked her if she had ever worked in a nursing home and applauded her expertise, "You are really good at this!" He also frequently gave immediate "good" comments when team members contributed good new ideas (e.g., "This patient needs discharge planning.") or provided comprehensive care (e.g., After being told that DNR status was on the chart with note written, Dr. W. said, "We appreciate that."). Dr. W got commitment from the residents asking for differential diagnoses and made them give evidence for each of the diagnoses they entertained (e.g., hypoxemia). If the team did not include an important diagnosis in their differential (e.g., pulmonary embolus), he corrected their omission and explained his reasoning which included the general rule that PE should always be considered in bedridden hypoxemic patients and asked the team to tell him how they would rule/out a diagnosis of PE.

Dr. W modeled setting his expectations with the team. This was the first day he was rounding with the team and he spent the first 10 minutes telling the team what order he wished to see patients (i.e., ICU first then the senior resident could prioritize others). To help the team prioritize, he asked if there were any patients "in trouble" he needed to see. He also asked that somebody other than the person presenting locate the chart and get it for him.

Dr. W used learner-centered teaching skills including being genuine (e.g., he shared his frustration over the heroin addict patient), creating a learning environment of respect for patients and for learners and safeness for learners to ask questions, challenging students to create new learning objectives (e.g., "Read about how heroin and other illicit drugs affect the kidney and tell us tomorrow"), demonstrating his love of careful, systematic practice of quality medicine (e.g., "Can we go back over the neuro-muscular exam?") and actively engaged all learners in questions and answers as well as demonstrating skills such as chest x-ray reading.

Dr. W modeled patient-centered communication and care demonstrating most of the skills including greeting patients by their surnames, building relationships with patients by being a good listener (e.g., Muslim man due for skin graft who could only accept an auto graft and explained his religious and cultural beliefs and values), using humor and showing sincere caring, asking open-ended questions, acknowledging patient's social context, responding to patient's nonverbal cues (e.g., addict patient's agitation and desperation to get out of the hospital), asking permission to examine patients, respecting health beliefs and spiritual values (e.g., Muslim man), asking patient for their concerns and questions, making eye contact with patients and explaining to patients in lay language they could understand.

Areas for Consideration:
Dr. W asked questions of all members of the team and when given the correct answer moved on to other topic discussion or questions. He did not ask "How?" or "Why?" questions, hence it was assumed that if a learner gave the correct answer that they had the correct answer for the right reasons and it was not a guess or a correct answer for the wrong reasons. Questions like, "Why do you think PE is a commonly missed diagnosis for hypoxemia?" or "How does that work?" help the teacher to get at the learner's understanding or misunderstanding. Once the learner's level of understanding is clear, there is opportunity for the teacher to ask questions to help the learner move their understanding forward or correct their misunderstanding. Asking questions that do not have yes or no or factual answers, promote dialogic (conversational) and more active learning.

Figure 2. Supplement feedback to teaching attendings based on the OFS. (Continued)

Reflective learning is necessary for practice-based learning and improvement, and I noted no modeling of reflection on experience or questions to learners that might promote reflection or reflective learning. Questions such as "What might you do differently next time you see a patient like this to improve the patient's outcome?" or "When you have seen patients with this disorder in the past, how did you manage them? Did they do better or worse than this patient?" Modeling reflective learning could include asking self [out-loud], "This is similar to the other 20 patients I have seen with leg ulcers, and Bunny Boots worked remarkably well. What have you found in your experience with patients with leg ulcers that has worked?" Thinking back over experience and self assessing performance and desirability of outcomes, is a habit needed to be reflective practitioner.

EBM literature was not referred to during the rounds I observed. Getting residents to look up evidence for a pertinent patient-related question that the team has could promote evidence-based practice.

Although, Dr. W performed some of the learner-centered teaching skills, for the most part his teaching was teacher-centered and patient-centered. This was his first day on this service, and there were a number of patients to see for whom he is responsible for writing notes, so some teacher-centeredness is appropriate to be sure the work gets done. On later days, more learner-centeredness would promote more learning by learners as adult learners learn what they want to learn and think they need to learn.

Systems-based practice was modeled by the team players and Dr. W but not really taught. It can be explicitly taught by pointing out the interdependency of the multiple hospital services, medical and nursing disciplines and hospital support staff such as housekeeping, etc that contribute to and are needed to provide quality care to patient like the ICU patient with early bedsores and leg ulcers who was likely septic and recovering from shock.

Figure 2. (Continued)

The OFS (Figure 1) itemized three specific skills sets: (a) the principles of learner-centered teaching (10 items),[4] (b) the widely promoted clinical microskills (5 items),[7] and (c) patient-centered communication skills adapted for the bedside (15 items).[8] (See Figure 1.) Each of these skill sets were derived from the published peer-reviewed work of established experts, geared toward the cognitive level of the faculty, and directly related to the DOM's instructional objectives, thereby contributing to the instrument's content and face validity.[18] The three ratings used for assessment were A, I, and N. The A rating defined the skill as being accomplished, the I rating reflected that a skill item was attempted but needed improvement or needed to be done and was not, and the N rating indicated that the skill was either not seen by the observer or not appropriate for the situation. Examples were included on the OFS to document the behavior and the context that led to a rating.

At the end of the 2 years of our teaching observation with feedback program, we had performed 42 observations with written feedback to 28 different faculty, 24 GIM faculty, and 4 Medicine subspecialists. The total number of GIM faculty at the hospital is 51; hence almost half (48%) of GIM faculty were observed during the 2 years of the program, and those observed were the 24 GIM faculty who taught most often. Four of the 24 GIM faculty observed were women. Four of the 24 GIM faculty were new faculty just out of residency with less than 2 years of teaching experience. Of the 24 GIM faculty observed, 15 were observed once, 5 observed twice, 3 observed three times, and 1 observed four times. Hence 9 of 24 (38%) GIM faculty observed had multiple observations of their teaching during the 2-year observation program.

Evaluation

Our analysis of the observation data collected began by tabulating and counting the ratings (A, I, N) for each item on the OFS to identify which skills were most commonly in need of improvement and which skills were most commonly accomplished by the DOM teaching faculty. Table 1 shows the number of faculty that received an I, A, or N for each item on the OFS. The following teaching skills were most often found to need improvement (receiving 14 or more I ratings):

- Learner-centered teaching skills: "Facilitates self-reflective learning," "Creates balance between active learning experiences and reflection," and "Attending shares personal reflections"
- Microskills: "Probes for evidence" and "Reinforces what was done right with specific details"
- Patient-centered care skill: "Asks patient permission for learners to observe"

Table 1. *Number of Ratings for each OFS Item*

Item #	Rating #		
	I	A	N
Learner-Centered Skills			
1	0	16	22
2	4	31	3
3	1	37	0
4	2	36	0
5	11	23	4
6	11	22	5
7	14	23	1
8	24	14	0
9	13	24	1
10	29	9	0
Microskills			
1	8	30	0
2	17	20	1
3	10	28	0
4	14	20	4
5	3	35	0
Patient-Centered Care			
1	4	29	5
2	15	17	6
3	5	30	3
4	6	18	14
5	1	32	5
6	3	31	4
7	5	25	8
8	4	30	4
9	9	26	3
10	3	13	22
11	1	33	4
12	6	27	5
13	1	34	3
14	1	31	6
15	1	32	5

The number of I (needs improvement) ratings on an individual teaching observation ranged from 0 to 19. The mean number of I ratings for all observed teachers was 5.2 ($Mdn = 5.3$). Age or years of experience did not correlate with better ratings as the four teachers newly hired and beginning practice straight out of residency had an average of 5.0 I ratings. Because I ratings depended on the clinical context of rounds and no teaching faculty member observed accomplished all items on the OFS, we chose to count total I ratings to indicate teaching ability rather than changes in individual item ratings from I or NA/NS (Not Appropriate/Not Seen) to A. Of the nine teachers observed more than once, seven showed a decrease in their number of I ratings between subsequent observations. Hence more than three fourths of the faculty observed more than once showed improvement (i.e., fewer items that needed improvement) in the skills documented on the OFS.

We compared OFS results between the 12 hospital-employed core teaching faculty to the 12 private teaching faculty. Of the 12 hospital-employed GIM faculty, 4 had just completed residency and 8 had more than 5 years' experience as teachers. All hospital-employed core GIM faculty were observed once, and 4 (all with more than 5 years' teaching experience) were observed multiple times (3 observed twice and 1 observed three times). The median number of I ratings for hospital-employed core GIM faculty was 5.8. Three of the 4 observed more than once had fewer I ratings on repeat observation and hence improved their teaching skills.

Twelve different private GIM faculty were observed, and 5 of the 12 were observed more than once. The median number of I ratings for the observed private GIM faculty was 5.0. Four of the 5 teachers (80%) observed multiple times had a decrease in the number of I ratings over time, thereby showing improvement over time in their teaching skills.

We compared the hospital-employed teaching faculty and private faculty total number OFS I ratings to resident evaluations of faculty teaching collected annually at the end of the academic year by the DOM, which are used to construct a "Best Teacher" list each year. The 48 Medicine residents at Lehigh Valley Hospital are annually asked to give a global teaching evaluation for each member of the 174 Medicine (51 GIM and 123 subspecialty) faculty. Characteristics rated by residents in the global rating include (a) teaching ability, including enthusiasm for teaching, bedside teaching, challenging the learner, and skill; (b) mentorship, collegiality, and approachability, and (c) medical knowledge. The ratings of those faculty with a minimum response rate of 10 are averaged and ranked, with number 1 being the highest-ranked Medicine teacher, or "Best Teacher," of the year. The remainder of the faculty are ranked 2 to 110 (the number of faculty in the DOM active enough in the teaching program to get 10 resident responses). We also compared the faculty ranking from the DOM evaluation system for both the observed 12 private GIM faculty and 12 unobserved private GIM faculty to see if our teaching observation with feedback was more likely to change the annual resident global ratings of the GIM faculty we observed multiple times.

The median resident Best Teacher ranking of the core faculty, all of whom where observed, improved from 26 in 2003–04 to 12.5 in 2004–05. The median resident Best Teacher ranking for the 12 observed private teaching faculty improved from 85 in 2003–04 to 52 in 2004–05. The resident ratings for 12 other private GIM faculty who were not observed and received no feedback had no improvement, and in fact decreased, in their median (95 in 2003–04 and 100 in 2004–05) Best Teacher rankings.

The summary sheet feedback written comments were analyzed and counted using the taxonomy for written comments described by Holmboe[19] in which evaluation comments are categorized as global, dimension (in this case, item) specific, example or behavior, or recommendation. Analysis revealed that the 37 feedback summaries contained 26 global comments, 363 dimension or item-specific comments, 256 example or behavioral comments, and 73 recommendations. Hence, the feedback provided to teaching faculty was specific and included examples and documentation of faculty teaching behaviors. An average of two recommendations (range = 0–4) were included in each observation summary.

Examples of global comments include "excellent role model" and "shows genuine interest in education." Examples of dimension-specific comments are "Dr. B. challenged a student who says he does not know how to use the computer, 'Okay, now it is time to learn' and showed him" and "Dr. S. engages in patient education by asking 'What do you think hospice means?' His asking a patient to explain what they understand about hospice clearly role-modeled for the team what is needed to try to understand what a patient understands." Examples of behavioral or example comments are "Dr. D. told the team he 'was stumped' (which is wonderful and likely to be very liberating to the learners who think they have to know it all)." and "The patient had a blank look on his face—he was being discussed and not included . . . the team was ignoring the patient's presence. (I wondered if the patient was upset hearing what he heard [discussed] . . . but did not understand about his heart)."

Examples of recommendations are "When giving positive feedback, make sure it reinforces specific behavior" and "Work to integrate more reflective learning into teaching."

Unanticipated indications of success of this intervention also occurred; the teaching observation with feedback program spread to other departments in the institution and, within the DOM, hospital-employed core faculty requested regular observation as well as training to do peer teaching observation of each other. At the end of the 2-year teaching observation with feedback program, the Medicine Department's Education Committee requested that MRS and KH develop a summary delineating the strengths and weakness of the teaching they had observed during the 2 years of the observation program. The Medicine Residency Program Director shared this list with the GIM Division, and the DOM at large, both of which were relieved to learn that faculty development of teaching faculty was being systematically addressed. The DOM teaching observation summary was later presented to the institutional GME committee. The Medicine Residency Program Director met individually with the hospital Chief Medical Officer and the chairs of each clinical teaching department to present the DOM's teaching observation summary and to explain the teaching observation with feedback program. As a result, all the institutional teaching departments (Surgery, ER, Pediatrics, Family Medicine, and OB/GYN) requested direct observation of their teachers, which would function as a needs assessment to identify what their departmental faculty development needs (with respect to improving teaching) are. At this time, observations of teaching and a summary of strengths and weaknesses have been completed for all six departments, and most have planned future faculty development to respond to them. Unsolicited, the new Hospitalist DOM teaching faculty have requested observations of their teaching.

Conclusions

The teaching observation with written feedback program described provides feedback to teachers within a short amount of time and thereby closes the loop and allows for reflection while the teaching moments are relatively fresh. We describe the development of our faculty feedback process, present observation tools, and report the evaluation of the data collected. The OFS systematically documented teaching skills receiving an I rating (skill improvement needed) at both the individual and department level. This enabled individual faculty as well as the DOM as a whole to appreciate on which teaching skills they needed to focus their improvement effort. As such, the OFS was a "needs assessment" providing guidance for setting learning goals to individual faculty or to the department.

It is of interest that the OFS teaching skill items most in need of improvement by DOM teaching faculty were skills involving reflection and reflective learning. In other words, diagnosis and management questions such as "What do you think is going on?" and "What is your management plan?" are common, whereas questions promoting reflection on rounds such as "How does this patient compare to other patients you have seen with X?" or "What could we have done differently to have improved this patient's outcome?" are unusual and were rare when this observation program with feedback began. Also noted was that many faculty found it easy to tell residents and medical students that they had done a "good job" but did not follow the praise with specific examples of what was done well. In addition, OFS feedback tabulation showed that patients were often included in teaching sessions without their expressed permission was also well documented.

We found that most of the faculty who were observed more than once had decreased I ratings over time after receiving written feedback. Teaching faculty members who were observed showed improved DOM resident Best Teacher rankings from 2003–04 to

2004–05, the time of the teaching observation program. Improvement in resident Best Teacher ranking, during the 2 years of the program, did not occur in faculty not observed. We have shown that our faculty development program—namely, observing teaching with feedback to faculty—has, for faculty observed over time, likely improved faculty use of microskills as well as learner-centered teaching of patient-centered care during inpatient resident rounds in a Medicine residency. We have shown that teaching observation with written feedback to teachers can be, by itself, an effective intervention.

Analysis of the feedback in the summary sheets provided teaching faculty there were few global phrases, a measure of judgmental assessment. Dimension-specific comments comprised the largest portion of the summary statements. It is noteworthy that 70% of the dimension-specific comments were accompanied by an example or a behavioral statement. Hence we provided feedback with specific detail as we encouraged the faculty to do. The average of 2.1 recommendations (range = 0–4) reflects our intention to be generally nondirective and, instead, encourage faculty to decide for themselves what and how they would like to improve their teaching.

The spread of the teaching observation program with feedback to all the teaching departments within the institution and the request by faculty to continue to be observed as well as to learn to do peer teaching observation reflects increased awareness of and value in improving teaching as well as faculty interest in collective learning. As systems theory would support, the mere introduction of clinical observers to the department impacted teaching on multiple levels. It made a statement that teaching is important and valued by the department leadership. In addition, it facilitated increased attention and concern by the faculty with improving the quality of teaching, particularly with respect to teaching patient-centered care. Even though there was institutional interest with improving patient-centered care and learner-centered teaching, the observations indicated that the traditional model of medical education (teacher-centered and disease-centered teaching and physician-centered care) was the prevailing model albeit seemingly changing as a result of our observation with feedback program.

Balancing our attention to content with focused attention to process was critical to expanding the original definitions of effective teaching from "What is being said?" to "How is learning being accomplished?" In other words, we had to move beyond the department's emphasis on evidence-based content and additionally recognize the skills that implicitly facilitate learning such as role modeling, admitting mistakes, letting the resident take the lead, asking probing questions, and discussing one's own learning process. Recognizing effective teaching as both process and content allows faculty a greater range of skills from which to draw and develop their teaching rather than investing their professional identity solely in their ability to recite current literature. We definitely saw more reflection of experience and prior practice on rounds during the latter year of the study than we did during the 1st year. Feedback to residents, in general, became more specific, and teachers over time asked more questions of residents and gave fewer minilectures.

In addressing the faculty's needs as learners, we realized that faculty development needed to be learner centered so that faculty experienced learner-centered learning and could be better learner-centered teachers. We believe that this change to individualized learner-centered faculty development offers the faculty a heightened sense of program ownership and promotes a grassroots process by which new teaching practices materialize. We believe this process is respectful of the time pressures faced by busy clinician educators. In this light, the OFS becomes more than a tool for documenting teaching skills but also serves as a symbol that both reflects and alters the cultural values of the organization.

There are several limitations of our study. Lumping of NS and NA was likely a mistake, and we learned less from our observations than we could have. We have no evidence that improved evaluations of teaching actually impact the quality of resident learning and could impact the quality of patient care. One might assume that if there is increased attention to role-modeling patient-centered care that patients would benefit. It was, however, beyond the scope of this study to collect patient outcome data before and after the educational intervention. In addition, we have no evidence that our intervention of providing feedback continued to impact teaching after our observations ended.

In summary, direct observation with feedback offer a starting place for generating new discussions about the quality of teaching within a department. Suggestions for future research include waiting for an extended period in between observations (i.e., 1 year) to see if earlier feedback interventions have a lasting impact on teaching practices. In addition, measuring resident clinical competence both before and after such a faculty development intervention would provide evidence that improving teaching results in improved resident learning and increased resident clinical competence. Finally, incorporating patient outcome data would further clarify the effectiveness and systemic impact of learner-centered faculty observation programs. Although our project has benefited from both the availability of time and grant funding, future efforts toward improving effective teaching need to incorporate approaches for introducing patient-centered

patient care and learner-centered teaching skills to faculty to advance compassionate quality health care for patients.

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