The Schwartz Center Rounds: Evaluation of an Interdisciplinary Approach to Enhancing Patient-Centered Communication, Teamwork, and Provider Support

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Abstract

Purpose
To assess the impact of Schwartz Center Rounds, an interdisciplinary forum where attendees discuss psychosocial and emotional aspects of patient care. The authors investigated changes in attendees' self-reported behaviors and beliefs about patient care, sense of teamwork, stress, and personal support.

Method
In 2006–2007, researchers conducted retrospective surveys of attendees at six sites offering Schwartz Center Rounds ("the Rounds") for ≥3 years and prospective surveys of attendees at 10 new Rounds sites that have held ≥7 Rounds.

Results
Most of the retrospective survey respondents indicated that attending Rounds enhanced their likelihood of attending to psychosocial and emotional aspects of care and enhanced their beliefs about the importance of empathy. Respondents reported better teamwork, including heightened appreciation of the roles and contributions of colleagues. There were significant decreases in perceived stress ($P < .001$) and improvements in the ability to cope with the psychosocial demands of care ($P < .05$). In the prospective study, after control for presurvey differences, the more Rounds one attended, the greater the impact on postsurvey insights into psychosocial aspects of care and teamwork (both: $P < .05$). Respondents to both retrospective and prospective surveys described changes in institutional culture and greater focus on patient-centered care and institution-specific initiatives.

Conclusions
Schwartz Center Rounds may foster enhanced communication, teamwork, and provider support. The impact on measured outcomes increased with the number of Rounds attended. The Rounds represent an effective strategy for providing support to health care professionals and for enhancing relationships among them and with their patients.

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The effort to foster effective communication among health care providers and with patients and families is a significant challenge in our complex health care systems. Patients, providers, and policy makers understand its importance, however, and with good reason. High-quality interpersonal relationships, communication, and "whole-person" knowledge of patients have been correlated with improvements in clinical and functional status, adherence, patient trust, reduced malpractice suits, and the satisfaction of both physicians and patients with their encounters.[1–7] As the medical profession has shifted from "physician-centered" care to "patient-centered" or "relationship-centered" care, patients' experiences of care are now valued and measured.[8–14] In addition, empirical studies have shown the correlation between close integration of care teams and improved patient health outcomes, reduced mortality, shortened length of stay, and better organizational outcomes, including enhanced workforce morale and reduced burnout and staff turnover.[15]

Progress has been made in teaching and assessing communication in medical education, concurrent with shifts in professional and public perceptions of its importance, especially in the preclinical years of undergraduate medical training.[16,17] Initiatives by the Accreditation Council on Graduate Medical Education have encouraged additional attention to this domain in postgraduate training.[18] Team-based learning has been introduced in undergraduate education,[19] and whole-team simulation training is being used in some disciplines among health care teams.[20,21] Nevertheless, although medical educators and clinicians strive to create positive learning environments, the "hidden curriculum," that which is learned by watching what teachers and clinicians do rather than by merely listening to what they say, continues to undermine compassion, collaboration, and communication.[22,23] The medical community has not systematically addressed the need to foster, teach, and evaluate communication and collaboration with patients and among professionals across the continuum of health profession education.[24] Meanwhile, many care providers struggle in the current health care climate to maintain their sense of satisfaction, their compassion and psychological equilibrium, and a network of personal

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support.[25] Few opportunities exist to enhance relationships and communication among all members of multidisciplinary health care teams, to teach the advanced communication skills needed in our complex health care environments, and to create supportive environments in which all can learn from each other.

The Schwartz Center Rounds provide such opportunities. Initiated in 1997 by members of the Kenneth B. Schwartz Center and piloted at Massachusetts General Hospital (Boston, Massachusetts), "the Rounds" are now established in more than 186 sites across the United States. The goals of the Rounds are to improve relationships and communication with patients and among providers and to enhance providers' sense of personal support. More background information on the Rounds can be found on the center's Web site (http://www.theschwartzcenter.org). They offer a safe forum in which providers can share their experiences, dilemmas, joys, concerns, and fears (both for their patients and for themselves). The Rounds are held in diverse environments, including academic medical centers, community hospitals, outpatient practices, community health centers, and nursing homes. Participants and learners from various disciplines and professions attend, in numbers ranging from 35 to 200 at each site. The Rounds are one-hour, case-based, interactive discussions held monthly or bimonthly and led by a physician and/or a professional facilitator. Each session begins with a brief presentation of a patient (or family) case by members of the health care team who cared for the patient. This presentation introduces multiple perspectives on selected psychosocial topics. Audience members and the presentation team participate in the facilitated group discussion that follows.

The Rounds address a wide range of important topics rarely discussed elsewhere.[26] These topics include the management of team conflict, stories of hope and miracles, instances when providers become patients, the impaired professional, the impact of patient violence toward providers, instances when cultural or religious beliefs impair providers' ability to communicate, the impact on providers of making a mistake, humor and healing, and many others.

Because no studies had been done to evaluate the outcomes of the Rounds, the Schwartz Center commissioned just such a study in 2006–2007. The goals of the study were to assess the impact of the Rounds on self-reported changes among attendees in their beliefs about patient care, their behaviors during health care interactions, their participation in teamwork, and their sense of stress and personal support. Researchers also gathered participants' reports of changes in institutional practices and policies that the participants attributed to issues raised at the Rounds.

Method

Evaluation design and survey procedures

The evaluation included two major components: analysis of retrospective surveys at "experienced" Rounds sites (i.e., where the Rounds had been in operation for at least three years) and analysis of prospective (pre/post) surveys of attendees at "new" sites both as Rounds were first implemented and after each site had held Rounds seven or more times. The six experienced Rounds sites included five hospitals in the Northeast and one in the Midwest. Between summer 2006 and summer 2007, participants identified by Rounds coordinators received an e-mail request to participate and a Web link to the electronic survey. Researchers also performed semistructured interviews at five of these sites with 44 participants, including providers, Rounds leaders and facilitators, and hospital administrators.

Between fall 2006 and winter 2007, the pre/post survey was sent to providers at 10 hospitals across the country as those hospitals were initiating Rounds. Participating hospitals included six in the Northeast, two in the Midwest, one in the South, and one in the West. Pre-Rounds data collection was staggered to occur as new sites began holding Rounds. The Web link to the electronic pre-Rounds survey was sent to health care professionals identified by Rounds leaders as those who would know about or would be invited to attend Rounds. Post-Rounds data collection occurred after Rounds were held at least seven times at each site. The dates and titles of all of the Rounds that had occurred at each hospital during the study period were listed on each hospital's post-Rounds survey. Providers who participated in the study indicated which Rounds sessions, if any, they had attended.

We sent providers three reminders in an attempt to increase the rates of response to each survey. The institutional review boards of all 16 participating hospitals reviewed and approved the research procedures and measures, and we obtained written (electronic) informed consent from all study participants.

Measures

We constructed our surveys to investigate three domains: (1) insights into the psychosocial and emotional aspects of clinical care on patient interactions, (2) teamwork, and (3) support for providers. The three domains were identified through the use of a Logic Model[27] of the Schwartz Center Rounds and by consultation with program stakeholders. Each of the three outcomes was measured by having caregivers indicate their degree of agreement with a set of related statements or by having caregivers indicate the frequency with which they experienced specific feelings about their work. In most cases, the statements required caregivers to respond on a six-point rating scale; the possible responses ranged from "strongly disagree" to "strongly agree." The section of the survey on insights into care included seven items adapted with permission from the Jefferson Scale of Physician Empathy developed by Hojat and colleagues.[28] The section on support for providers included items excerpted and modified from the Perceived Stress Scale of Cohen and colleagues.[29] Program stakeholders, including a sample of Rounds leaders, reviewed the measures for face validity.

Statistical analysis

Responses to 15 statements about patient interactions were highly correlated (Cronbach coefficient: 0.88). We called this set of items the Patient Interaction Scale. Responses to nine questions about teamwork also were highly correlated (Cronbach coefficient: 0.88). We called this set of items the Teamwork Scale. The items in both scales are shown in Appendix 1.

Using these scales, we calculated a Patient Interaction score and a Teamwork score for each participant in the pre/post surveys. The scores were respondents' average responses to the items in each scale. We used regression analysis to assess whether exposure to Rounds explained the outcomes of interest. There was a great deal of variability in the Rounds attendance of survey respondents, which provided us with natural comparison groups. Besides examining Rounds attendance, we explored the influence of professional discipline; the participants' years of experience, age, gender, and race/ethnicity; and the presence of other opportunities to discuss the psychosocial and emotional aspects of care. However, these variables were generally not predictive of higher postsurvey scores.

For the retrospective analysis, we used one-way analysis of variance to evaluate whether exposure to Rounds explained the outcomes of interest. We calculated the significance of changes in perceived stress by using two-tailed *t* tests.

Results

Survey response rates

To estimate overall average Rounds attendance at the six sites, we calculated the midpoint of attendance ranges reported by Rounds leaders at each experienced site. Out of an estimated 413 potential respondents, 256 responded to the retrospective survey, for an estimated average response rate of 62%. We sent the prospective pre-Rounds survey to potential attendees identified by Rounds leaders (as described in Methods). Only those who responded to the pre-Rounds survey (n = 399) received the post-Rounds survey. The overall response (or retention) rate for the pre/post survey was 56% (n = 222).

Respondents

We assessed respondents' age, gender, race/ethnicity,[30] discipline, and years of professional practice to ascertain the demographic characteristics of caregivers who attend the Rounds. Most of the respondents were experienced caregivers; 43% of the retrospective respondents and 51% of pre/postsurvey respondents had been professionals for more than 20 years. Their average age was 46 to 49 years. Most of the respondents to both the retrospective and the pre/post surveys described themselves as white (90% and 88%, respectively) and female (78% and 82%, respectively). Respondents to the retrospective and the pre/post surveys were nurses (38% and 51%, respectively), physicians (21% and 19%, respectively), social workers (18% and 5%, respectively), clergy (6% and 5%, respectively), or other (17% and 20%, respectively).

Rounds attendees' perceptions of the impact of insights into psychosocial and emotional aspects of clinical care on their interactions with patients

Most of the providers in the retrospective survey indicated that attending Rounds had a positive effect on their patient interactions. The frequency with which respondents attended the Rounds had a statistically significant impact on 5 of the 15 Patient Interaction items. Those 5 items were (1) attending to patients' nonverbal cues, (2) having more compassion for patients and families, (3) feeling more comfortable discussing sensitive issues with patients and families, (4) having new strategies for handling difficult patient situations, and (5) feeling more energized about their work (Table 1). For each of the remaining items, participants who attended Rounds more frequently had higher mean ratings than did those who attended infrequently, although the differences were not statistically significant. Responses to the adapted Jefferson Scale of Physician Empathy items showed that a large majority of respondents (≥85%) believed that attending Rounds had increased their belief in the importance of empathy in patient care.

Most of the respondents in the pre/post study indicated that they had had a relatively high degree of insight into the psychosocial and emotional aspects of

Table 1

Retrospective Survey of Changes in Patient Interactions Among Schwartz Center Rounds Attendees Correlated With Frequency of Rounds Attendance at Experienced Sites, 2006–2007 (N = 249–250)

Changes	Attendance frequency: No.*	Item response: Mean (SD)†	*F*‡	*P* value§
I try harder to attend to patients' nonverbal cues and body language	• Infrequent: 113 • Frequent: 137	4.40 (1.25) 4.71 (1.17)	4.078	.045
I have more compassion for patients and families	• Infrequent: 113 • Frequent: 136	4.37 (1.29) 4.71 (1.10)	4.884	.028
I feel more energized about my work	• Infrequent: 113 • Frequent: 137	4.36 (1.31) 4.71 (1.13)	4.994	.026
I have new strategies for handling patient situations	• Infrequent: 113 • Frequent: 137	4.35 (1.19) 4.69 (1.04)	5.802	.017
I am more comfortable discussing sensitive issues with patients and their families	• Infrequent: 113 • Frequent: 136	4.27 (1.16) 4.56 (1.04)	4.438	.036

* "Frequent" attendees came to Rounds five or more times in the last year. "Infrequent" attendees came fewer than five times.
† Responses to each question were measured on a scale from 1 (strongly disagree) to 6 (strongly agree).
‡ The *F* statistic is the mean square for the factor divided by the mean square for the error.
§ Calculated by one-way analysis of variance between groups attending frequently and groups attending infrequently.

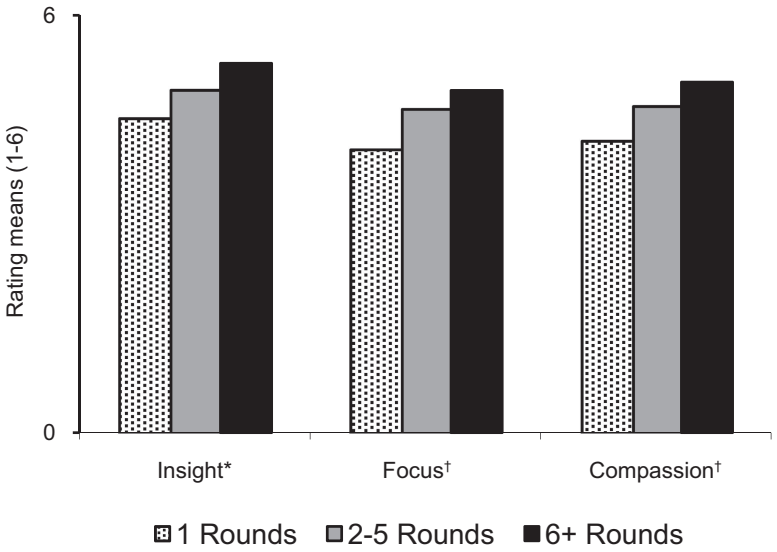

Figure 1 The correlation of the frequency of Rounds attendance at sites newly implementing the Rounds with the impact on aspects of Rounds-attending physicians' interactions with patients. The means of respondents' ratings of their insight into psychosocial/emotional aspects of care, their increased focus on effects of illness on patients' lives and families, and their provision of more compassionate care. The ratings were reported by using a one-way analysis of variance, with a categorical variable for frequency of attendance as the dependent variable. * The values for insight were significant at $P < .01$. † The values for focus and compassion were significant at $P < .05$.

patient care before attending the Rounds. In the prospective presurvey, the average score on the Patient Interaction Scale was 5.01 out of 6, and the average score on the adapted Jefferson Scale of Physician Empathy was 5.33 out of 6. When we controlled for any presurvey differences, regression analysis showed that the greater the number of Rounds attended, the higher the postsurvey Patient Interaction score ($P < .05$).

In addition, in the prospective study's postsurvey, administered after Rounds had occurred seven or more times at each site, we asked prospective study respondents to rate how strongly they agreed or disagreed with four statements about any changes in their patient interactions that specifically resulted from their attending the Rounds. We found that the greater the number of Rounds a person attended, the greater the impact on that person's insights into psychosocial aspects of care ($P < .01$), focus on the effects of illness on patients' lives and families ($P < .05$), and compassion ($P < 05$). Figure 1 illustrates these findings.

Impact on teamwork

We measured teamwork among providers by exploring the following areas in both retrospective and pre/post surveys: appreciation for the roles of colleagues from one's own and other disciplines, communication with colleagues about both clinical and psychosocial aspects of care, cooperation and coordination with colleagues, openness to expressing thoughts and concerns about patient care with colleagues, willingness to offer and receive support from colleagues, feelings of being alone, and a sense of belonging to a patient care team. Nearly all retrospective survey respondents indicated that Rounds had improved their participation as part of a team (Table 2). In particular, respondents had a heightened appreciation of the roles and contributions of colleagues from other disciplines and improved communication about both psychosocial issues and clinical issues.

In the prospective study's presurvey, the average score on the Teamwork Scale was 5.29 out of 6. In the prospective study's postsurvey, the greater the number of Rounds attended, the higher the postsurvey Teamwork score (after control for any presurvey differences)

Table 2

Retrospective Survey of Improvement in Teamwork as a Result of Schwartz Center Rounds Attendance at Experienced Sites, 2006–2007 (N = 245–248)

Area of improvement in teamwork	Degree of improvement		
	Not at all or only a little: No. (%)*	Some: No. (%)	A great deal: No. (%)
Appreciation of roles/contributions of colleagues from other disciplines	18 (7)	80 (32)	150 (61)
Appreciation of roles/contributions of colleagues from your discipline	27 (11)	113 (46)	106 (43)
Improved communication with colleagues about psychosocial issues	26 (10)	126 (51)	96 (39)
Improved communication with colleagues about clinical issues	36 (15)	130 (53)	81 (33)
Openness in expressing thoughts, questions, feelings about patient care with colleagues	31 (13)	120 (49)	95 (38)
Willingness to offer or receive support from a colleague	35 (14)	108 (44)	103 (42)
Cooperation/coordination with colleagues in patient care	28 (11)	116 (47)	102 (42)
Your sense of belonging to a caregiver team	30 (12)	108 (44)	109 (44)
Feelings of being alone in your work with patients	60 (24)	122 (50)	63 (26)

* Data from these two categories were collapsed because of the small number of rating responses within each category.

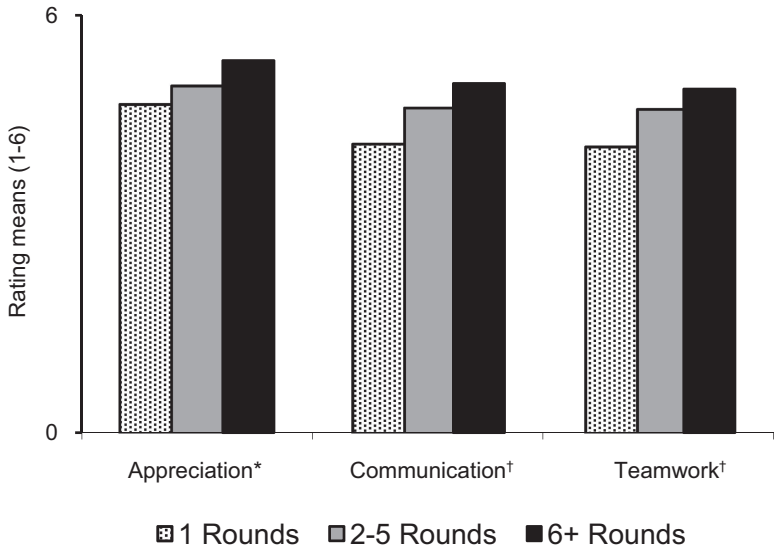

Figure 2 The correlation of the frequency of Rounds attendance at sites newly implementing the Rounds with the impact on aspects of Rounds-attending physicians' teamwork. The means of respondents' ratings of their appreciation of the roles and contributions of colleagues, their improved communication, and their greater participating in teamwork. The ratings were reported by using a one-way analysis of variance, with a categorical variable for frequency of attendance as the dependent variable. * The values for appreciation were significant at $P < .05$. † The values for communication and teamwork were significant at $P < .01$.

($P < .05$). In addition, when we asked prospective study respondents to rate how strongly they agreed or disagreed with three statements about any changes in their perceptions about their colleagues and their interactions that specifically resulted from their attending the Rounds, we found that the greater the number of Rounds a person attended, the greater the impact on that person's appreciation of colleagues' roles and contributions ($P < .05$), communication with colleagues ($P < .01$), and teamwork ($P < .01$) (Figure 2).

Semistructured interviews with participants at experienced sites showed that Rounds helped providers get to know one another and enabled them to put themselves in each other's place by hearing about their perspectives and experiences. One participant said, "I've gotten to know more people, and we can talk outside of Rounds as well. I think it is fostering good communication among teams." In addition to getting to know one another, caregivers gain a deeper understanding of their colleagues' challenges. Another participant said, "I truly have a higher level of respect for what [my] colleagues do and what they have to endure."

The Rounds enhance a sense of connection and shared purpose. One participant said, "You get a sense of solidarity and camaraderie because many people hold the same priorities." They also offer opportunities to model humility and to learn from others. Another participant said, "[Rounds] gives you permission to say, 'I don't know,' or 'We're still learning.' Schwartz models that capacity to be less all-knowing and to value expertise that isn't medical—[that includes] connection [and] compassion. It creates a new sense of competency, rather than arrogance."

Impact on stress and personal support

Respondents to the retrospective survey compared how often they experienced feelings of stress and an inability to manage the psychosocial and emotional demands of patient care before they began attending Rounds with how often they experienced those feelings at the time of the survey.[29] Survey results indicated statistically significant decreases in respondents' perceived stress ($P < .001$) and statistically significant increases in their ability to cope with the psychosocial demands ($P < .05$) and emotional difficulties ($P < .01$) of work after they attended Rounds, as compared with those ratings before they began to attend Rounds. There was, however, no significant change in respondents' confidence in their ability to handle difficult psychosocial aspects of care.

Most of the respondents to the prospective study's postsurvey (administered after their institutions had conducted seven or more Rounds) indicated that they felt more supported, less stressed, and less isolated after attending Rounds, although we did not find statistically significant changes in these domains. However, the more Rounds attended by pre/poststudy respondents, the greater the perceived impact of Rounds on these domains (Table 3).

Institutional outcomes

Fifty-one percent of retrospective and 40% of pre/postsurvey respondents observed changes in practices or policies within their departments or institutions since the initiation of Rounds. Participants at experienced sites were also asked this question during the semistructured interviews. All comments fell into four categories: unique and profound contribution, teamwork, patient-centered approach to care, and specific institutional outcomes.

The comments indicate that Rounds provide an opportunity for dialogue among providers that is otherwise largely unavailable. Such dialogue has the potential to change institutional culture. One participant said, "Rounds are a place where people who don't usually talk about the heart of the work are willing to share . . . their vulnerability, to question themselves. Rounds are an opportunity for dialogue that doesn't happen anywhere else in the hospital." Another said, "I don't think there are standard operating procedures that have changed. . . . [I]t's more the culture [that has changed]. [T]here should be a complete package of care that addresses the psychological, social, and spiritual aspects of care in addition to the medical—that should be the standard."

Respondents and interviewees emphasized the impact of Rounds on teamwork and communication across professions. One interviewee said, "The Rounds have given us the opportunity to open up a dialogue within our various clinics." Another said, "When Rounds started, we weren't in multidisciplinary teams, and I think Rounds fostered that movement." They also commented on

Table 3

Pre/Post Survey of Changes in Stress and Sense of Personal Support Correlated With Frequency of Rounds Attendance at Sites After Newly Implementing the Rounds, 2006–2007 (N = 150–153)

Changes	Attendance frequency: No.*	Item response: Mean (SD)†	F‡	P value§
I feel more supported in work with patients	• One-time: 25 • Infrequent: 80 • Frequent: 48	4.32 (1.11) 4.53 (1.35) 5.00 (1.17)	3.108	.048
I feel less stressed in work with patients	• One-time: 25 • Infrequent: 80 • Frequent: 45	3.64 (1.44) 4.16 (1.40) 4.58 (1.08)	4.133	.018
I feel less isolated in work with patients	• One-time: 25 • Infrequent: 80 • Frequent: 47	3.76 (1.27) 4.30 (1.40) 4.70 (1.20)	4.225	.016

* "One-time" attendees came to Rounds one time during the study period. "Infrequent" attendees came two to five times. "Frequent" attendees came six or more times.
† Responses to each question were measured on a scale from 1 (Strongly disagree) to 6 (Strongly agree).
‡ The *F* statistic is the mean square for the factor divided by the mean square for the error.
§ Calculated by one-way analysis of variance between groups.

having gained a sense of "the big picture" of patient care in their institutions and how they fit into it: "The mosaic . . . is more clear, instead of [your] being in your own encapsulated compartment."

Respondents, especially those at newer Rounds sites, commented on their departments' adoption of a more patient-centered approach to care. One said, "There are more patient care conferences to coordinate care [in] difficult situations." Another mentioned, "There is more of a focus on what is best for the patient whenever we are contemplating changes in policies, procedures, or unit processes."

Respondents also described institutional outcomes, including greater use of palliative care services and specific initiatives to improve patient care and provider support. One respondent said, "The number of days before the palliative care team is consulted has decreased since the Rounds." An interviewee at an experienced site said, "We have been able to set up, with a group of nurses, an intervention in our [intensive care unit]. The standard of care is now that two nurses [rather than one] get to meet and know all patients with bad prognoses. This idea came from topics at Schwartz Rounds." Another said, "One of the docs who is an anesthesiologist has formed a group to give support to people who are responsible for medical errors. . . . He presented his case a few years ago at Rounds, and this was a catalyst for starting the group."

Discussion

We describe here the evaluation of an educational forum that enhances communication with patients and families and among health care professionals while building the sense of support that professionals need to sustain themselves in their work. The Rounds foster several domains of the "patient-centeredness" that is desired by patients and family members, including a focus on understanding the patient as a whole person within a unique context and understanding the patient's experience of illness.[31,32] Respondents in our retrospective study reported greater insight into the psychosocial and emotional aspects of illness and care, a greater likelihood that they would consider the effects of illness on patients and families, and enhanced empathy (measured by a well-validated scale)—all as a result of their attending Rounds.

Attending the Rounds enhanced participants' understanding of the perspectives and challenges of colleagues, as well as of interdisciplinary communication. The qualitative data suggest that the Rounds provide a forum in which to experience a sense of connection and to reinforce a sense of shared purpose. These findings suggest that the Rounds can foster teamwork; attitudes toward teamwork are important because they can affect performance.[33,34] Effective teams require open communication and mutual respect for all members and their contributions.[35] Communication is often stymied, however, by professional hierarchies, the difficulty of speaking up across authority gradients,[36] discrepancies in perceptions about the presence or absence of collaboration,[37,38] and differences in preferences for professional hierarchies.[39] The Rounds provide attendees with a glimpse into the day-to-day professional lives of coworkers across disciplines and professions. By providing attendees with opportunities for dialogue, not just about patient care but also about their own experiences and the complexities of relating to one another, the Rounds may have the potential to initiate collaboration and to loosen hierarchical power structures.

The majority of pre/postsurvey respondents reported that Rounds attendance improved their sense of support and decreased their stress and sense of isolation. Retrospective respondents reported significant improvements in these areas after they began attending the Rounds. The burgeoning literature on stress and burnout attests to the significance of these problems among health care workers, students, and trainees.[40–44] Occupational stress and burnout affect providers' quality of life, which may result in absenteeism and staff turnover, which, in turn, affect service delivery, patient satisfaction, and institutional economics.[45–47] Limited evidence supports work-directed interventions to reduce stress, general symptoms, and burnout.[48] The sources of stress and burnout include conflict with patients and coworkers and the difficulties

inherent in caring for chronically or terminally ill patients.[49,50] The Rounds address these issues, and they may be a helpful component of longitudinal interventions to reduce work-related stress.

Most respondents in the postsurvey of the prospective study endorsed the impact of Rounds on their insights into illness, patient-centered focus, teamwork, and stress. However, we did not observe significant changes from the presurvey to the postsurvey in perceived empathy, impact on patient interactions, teamwork, or stress among these respondents. This lack of change may be due to at least two factors: the high levels of initial endorsement of these attributes by respondents in the presurveys and the length of time the Rounds had been in existence. The Rounds had been implemented for three or more years at retrospective sites, but for only one year to 18 months at pre/post sites. The average number of Rounds attended at pre/post sites was 4.5 sessions.

Educational and organizational efforts take time to change participants' attitudes and behaviors. We do not know the optimal number of Rounds sessions needed to effect such changes, but we cannot exclude the possibility that continued Rounds attendance over a longer period may facilitate such changes. Indeed, we observed a significant association between the number of Rounds attended and the Patient Interaction Scale and Teamwork Scale in both retrospective and pre/post studies—the more Rounds attended, the greater the impact. Furthermore, the greater the number of Rounds attended by pre/poststudy respondents, the greater the perceived impact of Rounds on feelings of being supported, less stressed, and less isolated.

This study had some limitations. Because Rounds sites do not keep master lists of attendees, we could not calculate precise response rates. Self-reported behaviors cannot be assumed to correlate with actual behaviors. Comparison of the impact of Rounds on attendees' and nonattendees' actual behaviors, patient satisfaction, clinical outcomes, teamwork performance measures, and burnout would be of interest, but, as with any educational intervention embedded within complex systems, such an effect would be difficult to attribute solely to Rounds. The impact of the duration of Rounds on measured outcomes may be clarified by extended pre/post studies in the future.

Conclusions

This study shows the impact of a longitudinal forum that fosters interdisciplinary communication, teamwork, and support. These issues are vitally important to patients, providers, health care organizations, and policy makers. The Rounds represent an important addition to educational and organizational efforts to enhance a sense of shared purpose and connection in the practice of medicine and the effective care of patients. Future studies to examine their impact on measures of quality and safety will be of interest.

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Appendix 1

A Complete List of the Items Contained in the Patient Interaction Scale and the Teamwork Scale Administered to Schwartz Center Rounds Attendees in Both Retrospective and Prospective Surveys, 2006–2007

The Patient Interaction Scale: Insight into the psychosocial and emotional aspects of patient care (Cronbach $\alpha = .88$)

- I am comfortable discussing tough/sensitive nonclinical issues with patients and their families.
- I have sufficient ideas/strategies for handling patient situations.
- I have compassion (sharing in the suffering of others) for patients and their families.
- I feel energized about my work with patients.
- I try to understand what is going on in patients' minds by paying attention to their nonverbal cues and body language.
- I try to imagine myself in patients' shoes when providing care to them.
- I show emotion when responding to a patient's expression of feelings.
- I consider the effects of illness on the personal lives of my patients.
- I consider the effects of illness on my patients' families.
- I try not to be hurried during my time with patients.
- I make a point to ask my patients about their interests, profession, and background.
- I share personal information with patients when it is appropriate.
- I consider what I know about a patient's coping style before deciding how to deliver bad news.
- I focus on my body language and other nonverbal communications.
- I try to review and communicate test results quickly to alleviate patient anxiety.

The Teamwork Scale: Insight into aspects of working with colleagues and being a member of a team (Cronbach $\alpha = .88$)

- I appreciate the roles and contributions of colleagues from disciplines other than my own.
- I appreciate the roles and contributions of colleagues from my own discipline.
- I have good communication with colleagues about nonclinical aspects of patient care.
- I have good communication with colleagues about clinical aspects of patient care.
- I cooperate/coordinate with colleagues on behalf of patients.
- I am open to expressing thoughts, questions, and feelings about patient care with colleagues.
- I am willing to offer support to or receive support from a colleague.
- I feel alone in my work with patients.
- I have a sense of belonging to a caregiver team.