Developing Emotional Intelligence in the Clinical Learning Environment: A Case Study in Cultural Transformation

Joanne Cohen-Katz, PhD
Jeffrey L. Sternlieb, PhD
Susan E. Hansen, MA
Julie A. Dostal, MD

ABSTRACT

Background Burnout continues to erode the physician workforce, and there are few effective intervention studies to guide educators.

Objective We explored residents' experience in a model environment emphasizing resident wellness, safety, and interpersonal skills.

Methods As 1 of 14 participants in the national Preparing the Personal Physician for Practice (P^4) project, the family medicine residency at Lehigh Valley Health Network implemented a series of curricular changes designed to transform the culture of education. This mixed-methods case study utilizes the results from 3 quantitative self-report instruments for well-being, along with content analysis of transcripts from 20 focus groups and 33 resident advising sessions to describe experiences of the residents enrolled between July 2007 and June 2012.

Results In the intervention, we found no statistically significant quantitative differences in the well-being of residents compared with the family medicine faculty and staff. Deductive (a priori and template) analysis and inductive thematic analysis of the residents' articulations of their experiences revealed 6 recurrent themes: naming/articulation of emotions, relationships, attitudes about self-care, self-reflection, delivery of learning experiences, and availability of resources.

Conclusions Quantitative measures of well-being did not capture the experiential value of the curricular innovations implemented by the residency program, while qualitative analysis highlighted themes important to residents. While not all residents in the intervention expressed support for the changes, repeated references to the nurturing educational environment indicate recognition of, and favorable responses to, the creation of an emotionally intelligent learning community.

Introduction

Physician burnout[1,2] is a serious concern, particularly during residency.[3] Physicians on the front lines of care (family medicine, internal medicine, and emergency medicine) appear to be at the highest risk.[4] Burnout may lead to serious problems, including physicians leaving the field,[5,6] disrespectful behaviors,[7] and errors in patient care.[4,8]

Nurturing psychosocial skills in medical learners might reduce cynicism and stress, increase clinical competency,[9] decrease incidents of serious medical errors, and improve relationships among patients and colleagues.[10] Eckleberry-Hunt et al[11] advocate for graduate medical education to shift the conversation about burnout away from diagnosing emotional exhaustion and depersonalization among residents and toward the creation of an educational culture of wellness. Using the theoretical "alternative residency culture"[12] as a framework, we conceptualized a transformed educational environment (what we call an *emotionally intelligent learning community*) comprising activities that cultivate 3 components: (1) wellness, consisting of designated time and space for self-care and reflection[13,14]; (2) safety, granting permission to be vulnerable, ask for help, and admit mistakes without fear of punishment or humiliation; and (3) interpersonal skills, fostering the ability to communicate, collaborate, and resolve conflicts.

We hypothesized that family medicine residents' self-reports of well-being, examined through surveys and qualitative analysis of transcripts of advising sessions and focus groups, would improve after cultural transformation of the residency into an emotionally intelligent learning community.

DOI: http://dx.doi.org/10.4300/JGME-D-15-00548.1

Methods

Setting, Participants, and Educational Interventions

The Lehigh Valley Health Network Family Medicine Residency Program in Allentown, Pennsylvania, implemented a series of curricular strategies as 1 of 14 participant sites in the Preparing the Personal

Physician for Practice (P^4) national demonstration project of innovation in family medicine residency education.[15] For this study, we examined data collected during the P^4 pilot period (July 2007–June 2012) from the 34 enrolled residents (approximately 6 per cohort, per year) as well as all clinical and nonclinical faculty and staff in the residency administrative offices and 5 practice sites. TABLE 1 lists the key interventions applied to the program's curriculum during the P^4 demonstration project.

What was known and gap
Physician burnout is a serious concern, with a dearth of information on effective approaches to reduce burnout during residency.

What is new
An intervention to reduce burnout by emphasizing wellness, safety, and interpersonal skills in a family medicine program.

Limitations
Single site, single specialty study with reduced generalizability.

Bottom line
Quantitative measures of well-being did not show any impact; qualitative analysis emphasized themes highlighting the benefits of an emotionally intelligent learning community.

Outcome Measures

The residency program administered 3 quantitative instruments to measure the well-being of residents and the faculty and staff. The Fordyce Emotions Scale[16] and the Satisfaction with Life Scale[17] were administered simultaneously via e-mail to residents, faculty members, administrative personnel, and clinical staff semiannually. Both instruments have been used internationally for decades to measure various populations, from college students to the elderly to mental health patients to members of specific professions. All survey responses are included in the reported data; we did not track responders or send reminders to maintain participant anonymity. Participants utilized unique ID codes, which were established for the P^4 pilot study and identified roles, so that resident versus nonresident data could be extracted for analysis. While the Fordyce Emotions Scale yields 5 component scores, we analyzed only the combination score, deemed to be the most accurate and reliable.[16]

A modified version of the Arizona Integrative Outcomes Scale (AIOS)[18] was disseminated to residents 2 to 3 times a year. Two versions of the instrument—a 24-hour and a 1-month recall period—have some validity evidence in diverse populations, including higher-education learners.[18] Only residents were measured with the AIOS instrument, as it was offered during dedicated educational time and incorporated with self-care coursework. Residents were asked to self-assess well-being using a 2-week recall period, which better suits the resident population's intense and condensed educational timetable.

Three of the authors (J.C.K., J.S., S.H.) performed the qualitative analysis, which examined 2 data sources:

- *Closing Ritual Transcripts:* The Resident Assessment Facilitation Team[19] (RAFT) meeting concluded with a systematic ritual designed to provide every participant with a safe space to comment on the events of the meeting.[19–21] Because this portion of the resident assessment meeting is standardized and includes a single statement from each participant (resident, adviser, residency coordinator, program director, behavioral health faculty member, and medical educator), we analyzed only this section of the 33 RAFT sessions between July 2009 (the implementation date of this intervention) and June 2012.
- *Transcripts of Resident Focus Groups:* Residents in each graduation cohort participated in structured focus groups conducted by a non–faculty member of the evaluation team at 4 intervals during their training period (after intern orientation and at the end of postgraduate year [PGY] 1, PGY-2, and PGY-3). The data set for this study contained precoded portions of transcripts from 20 sessions conducted between July 2007 and June 2012.

This study was approved by the Lehigh Valley Health Network's Institutional Review Board.

Analyses

We developed descriptive statistics (frequencies, means) from the deidentified quantitative data sets, and a nonparametric statistical Kruskal-Wallis test was run using SPSS version 23 (IBM Corp, Armonk, NY) to determine whether significant changes in resident and family medicine department community had occurred among academic years.

The research team utilized NVivo software version 10 (QSR International, Doncaster, Victoria, Australia) to extract sections of the RAFT and focus group transcripts that had been coded by another research team using a priori themes related to the hypotheses cited in the original P^4 project protocol. Working with this deidentified data set, 3 authors (J.C.K., J.S., S.H.) used a qualitative data analysis method known as *template analysis*[22] to harness the sweeping a priori categories that serve as the

TABLE 1
Key Innovations Applied to the Residency's Curriculum

Innovation	Description (Participants and Implementation Date)	Citations
Extended orientation (foundations)	First 10 weeks in residency include activities and clinical experiences designed to engage residents in family medicine department culture and promote cohort bonding (All participants in PGY-1 began in AY 2008)	12, 23
Off-site retreats embedded in curriculum	Self-reflection, disclosure, group activities to foster resident resiliency, group identity, and connection to family medicine practice (3 in PGY-1, 2 in PGY-2, and 2 in PGY-3 beginning AY 2008)	12
Dialogic, inclusive resident assessment	Resident-led semiannual assessment meetings focused on milestone progress, individualized educational plans, self-assessment (launched in spring 2008 with every resident having 1 RAFT session; since AY 2009, all residents have had at least 3 in PGY-1, 2 in PGY-2, and 2 in PGY-3)	19, 24
Closing rituals	Final exercise in RAFT meetings and many other formal residency activities, which allows space for all voices in the room to be present, without requiring anyone to respond or defend (Since AY 2007, all residents, faculty, staff members, or guests who attend educational or business gatherings held at the residency have been encouraged to participate)	19, 20, 21
Revised resident/faculty meetings	Safe, dialogic communication model employs participant volunteers into roles—facilitator, timekeeper, observer—to ensure productive and positive interactions; begins with "check-in" and ends with "closing ritual" (Since AY 2007, all residents, faculty, staff, and guests have been invited to volunteer to fill a role for single meeting)	
Faculty development on team building, communications, emotional intelligence	Parallel process training sessions began in AY 2008 to prepare instructors to be models of behaviors/skills residents expected to adopt (feedback skills, crucial conversations, mindful self-awareness)	25, 26
Self-care educational portfolio	Residency requirement places well-being on level with clinical competency/leadership development (graduation requirement for all residents since AY 2008)	27, 28
Administration and leadership portfolio focusing on emotional intelligence, communications, team-building skills	Integrated curriculum in communication, group facilitation, leadership taught by multidisciplinary team of faculty members; emphasis on practice improvement through innovation and collaboration; crucial conversations; feedback skills (graduation requirement since AY 2008)	29, 30

Abbreviations: PGY, postgraduate year; AY, academic year; RAFT, Resident Assessment Facilitation Team.

theoretical framework for the broader P^4 research project. Using template analysis, we separated resident statements into thematic units. The data set was revisited numerous times, individually and collectively, to test the emergent subthemes to ensure that they represented the aggregate sample, to confirm saturation, and to extract exemplar quotations. Themes were synthesized and operationalized by consensus of the group, which helped us define 3 attributes of an emotionally intelligent learning community: wellness, safety, and interpersonal skills.

Results

Quantitative Measures of Well-Being

Aggregate results by year for the 3 instruments are shown in TABLES 2 through 4. Response rates were quite low for residents for the 5-year study period, ranging from 14.3% to 42.9%. Response rates for the clinical settings were higher in the early years, with 75.8% responding in academic year (AY) 2008–2009, tapering to a low of 44.2% in AY 2011–2012. The average Satisfaction with Life Scale scores for each study year (TABLE 2) did not show statistically significant differences in well-being among residents from year to year between AY 2008–2009 and AY 2012–2013. Similarly, the Fordyce Emotions Scale combination score (TABLE 3) showed no statistically significant differences among years.

Measured by the AIOS (TABLE 4) instrument, aggregate resident overall well-being scores (range 0–100) also did not differ significantly across academic years, as indicated by a 1-way ANOVA statistical test. Response rates increased in later years, from a low of 23.8% in AY 2008–2009 to a high of 85.7% in AY 2010–2011.

TABLE 2
Satisfaction With Life Scale (Mean Scores 2008–2012)

Academic Year	Residents		Family Medicine Community		Normative Mean
	n	Score[a] (SD)	n	Score[a] (SD)	
2008	4	28.75 (6.85)	83	25.20 (6.90)	25.8
2009	3	24.33 (9.29)	40	24.88 (6.51)	25.8
2010	8	25.13 (4.05)	66	26.20 (6.47)	25.8
2011	7	27.29 (3.35)	72	27.26 (5.49)	25.8
2012	3	26.67 (5.13)	70	26.46 (6.00)	25.8

[a] Score range: 5–35 (higher score indicates higher well-being).

Thematic Analysis of Transcripts

While individuals' commentaries about experiences during residency were unique, analysis revealed 6 recurrent themes: naming/articulation of emotions, relationships, attitudes about self-care, self-reflection, delivery of learning experiences, and availability of resources. Residents often cited specific curriculum components and learning experiences. A brief description of each category and examples from the data set are included in the sections that follow.

Naming/Articulation of Emotions: Given the opportunity to provide feedback in focus group and advising sessions, residents often articulated which emotions they were experiencing, using terms such as *stressed*, *afraid*, *confident*, *relaxed*, or *exhausted*. In doing so, they revealed personal feelings about their progress ("I've noticed in myself, just getting more confident, just dealing with patients in the clinic."); challenges ("I get burned in the ED [emergency department], and those are really strenuous weeks, work weeks."); regrets ("The last couple of weeks I have not been characteristic of myself . . . and I have formally apologized to [program coordinator], but I also just have to thank her for putting up with all my crap. I had a little bit of a meltdown with just too many responsibilities for one human being to take on."); and vulnerabilities ("I'm just really grateful. Sorry. [Voice breaks.] Because I really feel like, you know, I can just be who I am and do what I have to do, and it just feels very sincere . . . And I'm so grateful for that because I don't think I get it from anywhere else.")

Relationships: Residents frequently commented on interactions with peers, faculty, program staff, and colleagues in the medical education community. Residents expressed satisfaction ("I think having, you know, close personal contact with our advisors, our faculty, our staff, I think the one-on-one conversations I have with them, even with the other residents, I think was very helpful."); inclusion ("I don't feel like they're just my attending kind of and you know that's it . . . kind of have a way of making you feel included and connecting with you not just on a student-teacher level but on a like person-to-person friendship kind of thing."); frustration ("Not having very much clout with that preceptor is kind of tough."); and comfort ("So I know that in the time that I was in the emergency department I needed a lot of support, and [a resident cohort colleague] helped a lot . . . being emotionally there for me and reassuring me that I'm not going crazy, basically."). Some residents noted personal growth as a result of interactions ("It just feels really big to me to be able to say to a medical student when they come out of a room with one of our patients, reeling . . . just to . . . say, 'There are some basic skills for managing a situation like this that will leave you feeling so much more empowered to do something,' you know? And that is a really big deal.").

Attitudes About Self-Care: Many residents discussed the activities they engaged in ("I exercise."; "I try to meditate and I try to journal."; "I take myself out of . . . this city every so often for like a mini vacation."; "I get a little relief after I cry for a while."). Some offered evidence that self-care efforts were successful ("I think probably the biggest . . . gauge for how things are going is most people, most friends and family outside of the residency that I know, are like questioning, 'Are you really in residency?' [Laughter from group.] . . . They would have expected, you know, it to be much more difficult to keep up with the rest of your things outside of the residency."). Other residents made connections between personal care and professional

TABLE 3
Fordyce Emotions Scale (Mean Combination Scores 2008–2012)

Academic Year	Residents		Family Medicine Community		Normative Mean
	n	Mean Combination Score[a] (SD)	n	Mean Combination Score[a] (SD)	
2008	4	71.88 (14.34)	82	64.86 (19.50)	61.66
2009	4	70.00 (18.71)	43	65.81 (16.35)	61.66
2010	9	60.56 (14.40)	69	67.78 (19.18)	61.66
2011	7	65.00 (15.75)	61	67.31 (16.42)	61.66
2012	3	76.33 (7.09)	72	70.90 (15.84)	61.66

[a] Score range: 0–100 (higher score indicates higher well-being).

TABLE 4
Mean Aggregated Resident Arizona Integrative Outcomes Scale Scores by Academic Year

Academic Year	Family Medicine Residents (2-Week Scale) Score[a] (SD)	n	24-Hour Scale Normative Mean	1-Month Scale Normative Mean
2008	57.74 (20.46)	9	64.3	65.8
2009	58.79 (20.84)	13	64.3	65.8
2010	61.77 (16.78)	35	64.3	65.8
2011	65.19 (19.13)	29	64.3	65.8
2012	63.98 (19.46)	27	64.3	65.8
2013	60.32 (18.00)	15	64.3	65.8

[a] Score range is 0 to 100 (higher score indicates higher well-being).

practice: "I learned that I do need to take care of myself in order to take care of others," and "If I'm telling the patients about nutrition and exercise, I've got to be doing it . . . also so that I can keep that stress level down . . . There are a lot of complicated patients, and it's stressful."

Self-Reflection: This category illuminates examples of residents becoming aware of themselves ("I realized that I'm not one of those people that is comfortable with change, especially when I don't understand why."), particularly as clinicians ("I have learned to embrace the emotion that goes along with the context of the doctor-patient relationship . . . instead of trying to put yourself off from that or to tend to stifle that to try and cultivate it."). Some comments offered a glimpse of how the residents processed their experiences ("If you have an attending who has a very different approach and philosophy than you, just negotiating that and coming up with a plan, when you know it's not how you want to do it when you get out . . ."). In some instances, this manifested in the form of disapproving statements. ("The support to me was sometimes felt [sic] as being catered and coddled, and I don't like that.")

Delivery of Learning Experiences: This category captures residents' perspectives of how the program activated them as learners. Some referred to unstructured experiences ("My team in particular is . . . good about recognizing educational needs, and if there's not going to be enough people for a team, then let's not waste time doing team things; there are other educational opportunities that are available that are also important.") or personal connections leading to unscheduled lessons ("I was reading a book that [the program director] loaned me, and it had many stories . . . allowing things to happen as they, uh, they unfold and just being curious about, uh, what's going on around us."). Other residents described the techniques that engaged them: "I would say that having 2 or 3 excellent faculty who really enjoy teaching, answering questions, explaining things in a calm manner, understanding, and getting the big picture of what the resident needed as far as education has helped me a lot." and "Always if you have a question or concern [about] what you want to do, they . . . always ask you, 'What do you want to do?' or 'What is your main interest?' and . . . 'What do you think we need to improve? . . . They let you think about what you need to do and how you want to do it." And when asked to explain the concept of adult learning, which is emphasized in the residency curriculum, this was the response: "It can be a little exhausting and it can also cut down on some of your enthusiasm."

Availability of Resources: Many cited the accessibility of faculty and staff ("I don't feel shy around anyone when I have a problem. So if my advisor's not there, you know, I can go to people over there, or you know, people in the clinic. Even the nurses and the front office staff are great.") Some pointed to specific program components, such as resident retreats ("When I think back to what worked for me in terms of planning my life, I have found the retreat time very helpful. Time that's devoted to . . . talking about these issues or thinking about careers."); support group ("I feel that support group is very helpful when you are in the hospital because I feel that's where most of our stress is."); and RAFT sessions ("I really appreciate the RAFT meetings supporting me through everything."). In general, residents indicated they had the support they needed: "You have a lot of resources and people to turn to when you have questions, concerns, or worries, so you don't ever feel like you're alone without someone to back you up or support you, or consult with."

Discussion

After the implementation of multiple curricular changes emphasizing wellness, safety, and interpersonal skills, family medicine residents in general recognized the nurturing culture, and described their experiences with naming of emotions, relationships, self-care, reflection, learning, and availability of resources. Quantitative measures of wellness remained unchanged.

Not every learner embraced the innovations, and residents expressed their dissenting opinions with candor—sometimes with outright disdain for the approach. Such expressions, however, exemplify the concept of safety through the shedding of the "culture of silence,"[31] too often present in academic medicine. The repeated articulations throughout the qualitative

data about the residency program's supportive learning environment indicate that most residents perceived a nurturing residency culture—a key goal of the new curriculum.

We maintain that these results are not surprising. The educational culture shift employed by this residency program provides space and time to reflect on what it means to become a physician. It does not, however, change the nature of the work residents do. Our intervention, at its best, normalized the residents' movement between the "extreme modes of stress"[32] they experience during the course of their training.

Other interventions to reduce burnout during residency also have not been fully successful. Williams et al[33] found limited evidence that administrative changes, such as duty hour reductions, a revised grading system, mindfulness training, and self-development groups, prevented burnout in medical students and residents. Wald et al[34] highlighted the use of a reflective writing e-portfolio as a professional identity development tool, creating opportunities for residents to explore work-life balance, resiliency, and burnout prevention. Like our interventions, this example answers the call for reform of medical education[35] to help individuals become physicians who practice from the heart and mind rather than those who simply do the work of a doctor.

Limitations of this study include its single site and single specialty format, which reduces the ability to generalize to other programs and settings. The longitudinal data on stress assume that each cohort of residents is similar in developing and perceiving stress, which may not be the case. Also, the instruments used to measure well-being may not be sensitive enough or used frequently enough to track the variability among residents. Finally, reviewing only portions of the transcripts might have resulted in omission of key themes important for interpreting residents' understanding of the new curriculum.

Future research should include multisite studies and the inclusion of control sites with less emphasis on well-being, as well as studies that follow residents into practice to determine whether long-term benefits exist.

Conclusion

The residents whose experiences defined what we termed an emotionally intelligent learning community were aware that they were part of a cultural experiment. Well-being scores for residents and the community did not change during the intervention. Analysis of resident feedback collected during the 5-year transition period indicates that, in general, residents recognized the purpose of the curriculum changes, accepted the new curricular processes, and appreciated the emphasis on physical and emotional wellness.

References

1. Billings ME, Lazarus ME, Wenrich M, et al. The effect of the hidden curriculum on resident burnout and cynicism. *J Grad Med Educ*. 2011;3(4):503–510.
2. Maslach C, Leiter MP. *The Truth About Burnout*. San Francisco, CA: Jossey-Bass; 1997.
3. Dyrbye LN, West CP, Satele D, et al. Burnout among US medical students, residents, and early career physicians relative to the general US population. *Acad Med*. 2014;89(3):443–451.
4. Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med*. 2012;172(18):1377–1385.
5. Bodenheimer TS, Smith MD. Primary care: proposed solutions to the physician shortage without training more physicians. *Health Aff (Millwood)*. 2013;32(11):1881–1886.
6. Linzer M, Manwell BL, Mundt M, et al. Organizational climate, stress, and error in primary care: the memo study. In: Henriksen K, Battles JB, Marks ES, Lewin DI, eds. *Advances in Patient Safety: From Research to Implementation*. Vol 1: Research Findings. Rockville, MD: Agency for Healthcare and Research Quality; 2005.
7. Leape LL, Shore MF, Dienstag JL, et al. Perspective: a culture of respect, part 2: creating a culture of respect. *Acad Med*. 2012;87(7):853–858.
8. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. *Lancet*. 2009;374(9702):1714–1721.
9. Dunn LB, Iglewicz A, Moutier C. A conceptual model of medical student well-being: promoting resilience and preventing burnout. *Acad Psychiatry*. 2008;32(1):44–53.
10. Haidet P, Stein HF. The role of the student-teacher relationship in the formation of physicians. The hidden curriculum as process. *J Gen Intern Med*. 2006;21(suppl 1):16–20.
11. Eckleberry-Hunt J, Van Dyke A, Lick D, et al. Changing the conversation from burnout to wellness: physician well-being in residency training programs. *J Grad Med Educ*. 2009;1(2):225–230.
12. Cohen-Katz JL, Miller WL, Borkan JM. Building a culture of resident well-being: creating self-reflection, community, & positive identity in family practice residency education. *Fam Syst Health*. 2003;21:293–304.

13. Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. *Ann Fam Med*. 2014;12(6):573–576.
14. Rakel DP, Hedgecock J. Healing the healer: a tool to encourage student reflection towards health. *Med Teach*. 2008;30(6):633–635.
15. Green LA, Jones SM, Fetter G Jr, et al. Preparing the personal physician for practice: changing family medicine residency training to enable new model practice. *Acad Med*. 2007;82(12):1220–1227.
16. Fordyce MW. A review of research on the happiness measures: a sixty second index of happiness and mental health. *Soc Indic Res*. 1988;20:355–381.
17. Diener E, Emmons RA, Larsen RJ, et al. The satisfaction with life scale. *J Pers Assess*. 1985;49(1):71–75.
18. Bell IR, Cunningham V, Caspi O, et al. Development and validation of a new global well-being outcomes rating scale for integrative medicine research. *BMC Complement Altern Med*. 2004;4:1.
19. Foster E, Biery N, Dostal J, et al. RAFT (Resident Assessment Facilitation Team): supporting resident well-being through an integrated advising and assessment process. *Fam Med*. 2012;44(10):731–734.
20. Baldwin C, Linnea A. *The Circle Way—A Leader in Every Chair.* Oakland, CA: Berrett-Koehler; 2010.
21. Bell E, Golombisky K. Voices and silences in our classrooms: Strategies for mapping trails among sex/gender, race, and class. *Womens Stud Commun*. 2004;27(3):294–329. http://communication.usf.edu/faculty/bell/voicesandsilences.pdf. Accessed July 21, 2016.
22. Crabtree BF, Miller WL, eds. *Doing Qualitative Research*. Thousand Oaks, CA: Sage Publications; 1999.
23. Foster E, Cohen-Katz JL. Caring for the family: teaching systems and cycles in a family medicine residency program. In: Miller-Day MA, ed. *Family Communication, Connections, and Health Transitions*. Vol 1. New York, NY: Peter Lang; 2011:323–348.
24. Baglia J, Foster E, Dostal J, et al. Generating developmentally appropriate competency assessment at a family medicine residency. *Fam Med*. 2011;43(2):90–98.
25. Patterson K, Grenny J, McMillan R, Switzler A. *Crucial Conversations: Tools for Talking When Stakes Are High*. New York, NY: McGraw-Hill; 2002.
26. Kroeger O, Theusen JM. *Type Talk: The 16 Personality Types That Determine How We Live, Love, and Work*. New York, NY: Dell Publishing; 1988.
27. Rabow MW, Remen RN, Parmelee DX, et al. Professional formation: extending medicine's lineage of service into the next century. *Acad Med*. 2010;85(2):310–317.
28. Siegel DJ. *The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are*. 2nd ed. New York, NY: Guilford Press; 2012.
29. Miller WL, Cohen-Katz J. Creating collaborative learning environments for transforming primary care practices now. *Fam Syst Health*. 2010;28(4):334–347.
30. Cohen-Katz J, Miller W, Dostal J. Growing relationships on the turtle's back: family medicine at Lehigh Valley Health Network. In Suchman AL, Sluyter D, Williamson PR, eds. *Leading Change in Healthcare: Transforming Organizations With Complexity, Positive Psychology and Relationship Centered Care*. London, UK: Radcliffe Publishing; 2011.
31. Dankoski ME, Bickel J, Gusic ME. Discussing the undiscussable with the powerful: why and how faculty must learn to counteract organizational silence. *Acad Med*. 2014;89(12):1610–1613.
32. Addison RB. Covering-over and over-reflecting during residency training: using personal and professional development groups to integrate dysfunctional modes of being. In: Little M, Lidtling JE, eds. *Becoming a Family Physician*. New York, NY: Springer; 1989:87–110.
33. Williams D, Tricomi G, Gupta J, et al. Efficacy of burnout interventions in the medical education pipeline. *Acad Psychiatry*. 2015;39(1):47–54.
34. Wald HS, Anthony D, Hutchinson TA, et al. Professional identity formation in medical education for humanistic, resilient physicians: pedagogic strategies for bridging theory to practice. *Acad Med*. 2015;90(6):753–760.
35. Irby DM, Cooke M, O'Brien BC. Calls for reform of medical education by the Carnegie Foundation for the Advancement of Teaching: 1910 and 2010. *Acad Med*. 2010;85(2):220–227.

All authors are with the Lehigh Valley Health Network. **Joanne Cohen-Katz, PhD,** is Director of Behavioral Sciences, Department of Family Medicine; **Jeffrey L. Sternlieb, PhD,** is Psychologist/Behavioral Scientist, Department of Family Medicine, and Associate Professor of Family Medicine, Morsani College of Medicine, University of South Florida; **Susan E. Hansen, MA,** is Coordinator of Program Evaluation, Department of Family Medicine Residency Program; and **Julie A. Dostal, MD,** is Vice Chair of Education, Department of Family Medicine, and Clinical Associate Professor, Morsani College of Medicine, University of South Florida.

Funding: The Dorothy Rider Pool Health Care Trust provided funding support for this study.

Conflict of interest: The authors declare they have no competing interests.

The authors would like to thank William Miller, MD, Elissa Foster, PhD, Drew Keister, MD, Nicole Defenbaugh, PhD, Nyann Biery, MS, and Jacqueline Grove for their insights and editorial assistance in creating this manuscript. The authors would also like to thank the faculty, residents, and graduates of the residency program for engaging in the work of transforming medical education.

Corresponding author: Susan E. Hansen, MA, Lehigh Valley Health Network, Department of Family Medicine, 8th Floor, 707 Hamilton Street, Allentown, PA 18101, 484.862.3076, fax 484.862.3096, susan_e.hansen@lvhn.org

Received October 22, 2015; revisions received May 17, 2016, and July 1, 2016; accepted July 6, 2016.