The Kind Care Bundle: A Curriculum to Teach Medical Students the Behaviors of Kind, Compassionate Care

Cynthia M. Cooper, MD, Galina Gheihman, MD*

*Corresponding author: ggheihman@partners.org

Abstract

Introduction: Patients' hospital experiences can be adversely affected by clinicians' negative behaviors. Simple positive behaviors, however, can have a dramatic impact on patient-clinician relationships. Medical students starting clinical training are ideal educational targets for learning good behavioral habits that promote kind, compassionate care. Methods: We developed the Kind Care Bundle, a collection of concrete verbal and nonverbal behaviors for showing compassion in patient interactions. The curriculum was taught in 3-hour small-group interactive sessions to first-year students. Students reflected on personal experiences of compassionate care and role-played the use of the Kind Care Bundle. In pairs, students interviewed patients about their experiences of kind, compassionate care while practicing the Kind Care Bundle. Students completed a postsession evaluation with Likert scales and free-text responses. Results: Thirty-seven of 40 students (92%) completed postsession evaluation forms. Session organization was considered excellent (27 of 37 students, 73%) or very good (nine of 37, 27%). Session relevance was rated as excellent by 30 of 37 students (81%) and very good by six of 37 students (16%). Students believed the bundle filled an educational gap. Qualitative themes included appreciation of concrete behaviors in the bundle, importance of empathy, and opportunity to reflect on one's own experience of compassion. Discussion: Students appreciated learning about specific behaviors for improving patient interactions. Targeting preclinical medical students has the potential to promote kinder and more compassionate patient interactions during subsequent clinical training. The long-term impact on students' behavior and on their personal and professional development requires further study.

Keywords
Professionalism, Humanism, Compassionate Care, Person-Centered Care, Communication Skills, Reflection/Narrative Medicine, Well-Being/Mental Health, Burnout

Educational Objectives

By the end of this activity, learners will be able to:

1. Reflect on their own personal experiences of kind and compassionate care, as well as examples of kind and compassionate care observed in the clinical setting.
2. Identify specific verbal and nonverbal behaviors associated with compassionate care and understand the components of the Kind Care Bundle.
3. Practice the Three E's during a patient encounter and interview a patient about their experiences of kind and compassionate care in the hospital.
4. Reflect on the experience of providing and discussing kind and compassionate care and identify opportunities to incorporate this into their clinical practice in the future.

Introduction

Patient experiences during hospitalizations may be adversely affected by clinician behaviors of brusqueness, overformality, or ignoring patients' and families' cues to ask for more time. A few interventions have been shown to improve patients' experiences, namely, sitting down during encounters and, to variable success, performing new patient rounds at the patient's bedside. These interventions, however, have been inconsistently adopted. At some academic hospitals, patient experience departments have been developed to try to address this gap, which is now tied to hospital performance and quality-based reimbursement through measures such as Hospital Consumer Assessment of Healthcare Providers and Systems survey scores.
Unhelpful behaviors in practicing clinicians are often learned and adopted during medical training through observation and mimicry of senior mentors and near-peers in the clinical setting. This hidden curriculum permeates the education medical students and residents receive as they progress in their training.5 Even in early medical education—during students’ first exposure to history taking and physical exam skills—traditional teaching approaches often explicitly stress thoroughness and accuracy but not warmth and kindness. Attitudes and behaviors demonstrating compassion and respect, found in abundance among first-year medical students,7 are inconsistently reinforced through training and may even be devalued in the clinical arena in exchange for efficiency. This devaluing of early idealistic traits of compassion may play a role in the high levels of feelings of depersonalization and burnout reported by both medical students8 and clinicians9 and in the increasing levels of cynicism and erosion of empathy in each successive year of medical training.10 There is some encouraging news. Acts of kindness and empathy can be taught,11 and compassion may improve both student wellness and clinical care.12 In the face of a crisis of burnout among students9 and physicians,13 focusing on compassion may offer a way forward.14

A person-centered and engaged bedside encounter, augmented with a bundle of specific behaviors stressing etiquette, respect, kindness, and compassion as essential components, may significantly increase both patient satisfaction with care and clinician satisfaction with the caregiving experience.15 We created the Kind Care Bundle of specific behaviors promoting kind, compassionate care and developed a curriculum to teach it to first-year preclinical medical students. Our intention was to target students prior to their formal clinical training in order to establish good habits of kind, compassionate care and to signal universal principles applicable to every single patient encounter. The Kind Care Curriculum addressed knowledge, skills, and attitudes: By having students examine their own experiences and speak with patients about kind and compassionate care, our intention was to promote empathy and shift attitudes. By providing students with a bundle of specific language and concrete behaviors for patient interactions, we aimed to close gaps in knowledge and skills regarding compassionate care.

In a review of the literature and similar topic areas in MedEdPORTAL, we found examples of effective curricula promoting humanism and professionalism in residents16,17 and fellows,18 as well as a creative simulation-based curriculum promoting empathy in anesthesiology residents.19 Indeed, there is a strong need for curricula that promote empathy, kindness, and compassionate care, as residents indicate they often do not have opportunity to discuss empathy or receive formal communication skills training following the first two years of medical school.19 One critique is that all of these curricula target clinical providers at the resident and fellow levels. Thus, the curricula target individuals already in clinical training rather than instilling knowledge and skills for compassionate care earlier in undergraduate medical education. Among studies of medical students specifically, such as those using professionalism flash cards during clerkships20 and reflective narratives21 to build empathy, most curricula target advanced clerkship students rather than preclinical ones. Also, the studies reviewed here utilize educational methods such as written case-based learning,17 simulation,18 and reflective writing,22 but none provide opportunities to work with patients directly. One curriculum involves training residents to lead family goals of care discussions,16 while another, developed by Kesselheim and colleagues, uses case vignettes to highlight challenges in humanism and professionalism and promote discussion among residents17 and fellows.18 In a simulation-based curriculum, anesthesiology residents role-play being a patient requiring an emergent C-section in order to build skills in empathy.19 While reflective practice promotes empathy23 and reinforces learning,24 these curricula do not offer concrete skills that can be learned to practice kind, compassionate care. In our review, we did not find a curriculum teaching concrete, simple behaviors that could be utilized in addition to communication strategies to demonstrate empathy in every patient encounter.

Our curriculum has the advantage of offering a bundle of verbal and nonverbal behaviors that can be used universally in all patient encounters. The curriculum is also different in that it targets first-year medical students at the earliest stage of their training before they have begun their clinical experiences. Finally, our intervention follows an experiential learning approach and involves an opportunity for medical students to interact with patients directly to build empathy and practice new language and behaviors for kind, compassionate care.

**Methods**

**Development of the Kind Care Bundle**

We developed a bundle of concrete verbal and nonverbal behaviors for showing attention, consideration, and compassion in patient interactions, naming it the Kind Care Bundle (Appendix A). The bundle consisted of specific behaviors that could be incorporated into any patient encounter, organized into the Three E’s, namely, entry into a patient’s room, the encounter with the patient, and exit from the room.
The Kind Care Bundle was developed using behaviors informed by evidence-based practices as well as best practices from our own experience, such as offering an extra blanket, bringing water or other items to the bedside, and readjusting the patient’s position to ensure comfort at the conclusion of an inpatient visit. Following its development, the Kind Care Bundle was reviewed both by clinicians and by patients and families. The bundle and pilot design were presented at a meeting of the Center for Educational Innovation and Scholarship at Massachusetts General Hospital (MGH) in Boston, Massachusetts, and reviewed by medical education research colleagues. The Kind Care Bundle was presented to the Patient and Family Advisory Council at MGH in June 2018 and modified based on feedback from patient and family representatives to ensure it captured the patient experience.

The Kind Care Curriculum
We then developed a 3-hour curriculum with the goals of introducing students to the Kind Care Bundle, allowing them an opportunity to practice the bundle in real time, and helping them reflect on their own personal experiences and those of patients with kind and compassionate care. Guided by adult learning theory and Kolb’s experiential learning cycle, we designed the session to include an experiential component and structured reflection in order to influence a change in students’ knowledge, skills, and attitudes.

Setting and Participants
We delivered this curriculum over five morning sessions at MGH in August-September 2018. Participants were 40 first-year students at Harvard Medical School, assigned to groups of eight to 10 students per session. The educational session was incorporated into the transition-to-clerksips course, which immediately preceded the start of clinical clerkships. The sessions were facilitated by author Cynthia M. Cooper. No prior knowledge or experience was necessary for the students. No prior knowledge was necessary for facilitators other than reviewing materials in the facilitator guide (Appendix B).

Session Outline
Before the session: Prior to each session, the facilitator identified hospitalized inpatients who were willing and able to participate in an interview about their experience in the hospital and their definition of compassionate care. Typically, one patient was selected for each pair of students. The facilitator obtained verbal consent from patients (generally on the medical service) and wrote down the patients’ room numbers, including approximately two to three backup options in case one of the patients was no longer available or willing to participate. Patients were informed that students would come later in the day to complete a 30- to 45-minute interview. Patients were also told that this was voluntary, that they could withdraw their participation at any time, and that the students were not part of their formal medical team.

As prework, we asked students to read an article entitled “Etiquette-Based Medicine” ahead of the session. We also asked students to wear white coats and professional dress in the session as they would be meeting patients.

During the session: All teaching notes for the facilitator, including appropriate timing for the session are included in Appendix B. The first hour was spent in a small-group-size classroom (eight to 10 students) with a large whiteboard. The facilitator began the session by prompting students to discuss the prework article. The facilitator then asked students to break into small groups of two to three and pair-share (i.e., share their experiences in pairs) about a time in their lives when they felt particularly cared for. We encouraged students to specifically think through verbal and nonverbal ways that caring and compassion were conveyed at that time. The facilitator next brought the group back together and facilitated a discussion of these experiences, capturing common themes on the whiteboard. Then, students were asked to share any clinical experiences in which they had observed compassionate care. The facilitator pointed out similarities between the experiences of being cared for themselves and of seeing compassionate care on the wards and helped students to develop common definitions of compassionate care.

Next, the facilitator introduced the Kind Care Bundle (Appendix A) and discussed the Three E’s format of entry, encounter, and exit. The facilitator demonstrated the application of the Three E’s to the group with one student volunteer acting as a patient (alternatively, two students might be asked to role-play an encounter, with the group discussing what went well in the encounter and what could be improved). The students were then divided into pairs and each pair went to the bedside of the recruited patients to interview these individuals about their care experience using specific question prompts and to practice the behaviors of the Kind Care Bundle. Students were instructed to introduce themselves to the patients, apply the skills of the Kind Care Bundle, and work through the guiding interview questions (Appendix C). Students worked in pairs, taking turns asking patients questions and jotting down notes. Approximately 1 hour was allocated for students to find their patient’s room, interview the patient, and return to the group setting.

In the final hour of the session, after the patient interviews had been completed, students returned to the classroom, where they...
were guided by the facilitator in debriefing their experiences. Following questions in the guide (Appendix B), the facilitator asked students what they had learned from their patients about how they perceived caring and compassionate care. Students also reflected on their experience using the Kind Care Bundle in their interaction with the patient in addition to the usual patient-bedside experience. To close the session, every student was asked to share one thing they had learned and one thing they would like to incorporate into their care going forward.

After the session: Following this debrief, students were allocated 10 minutes to complete the end-of-session evaluation (Appendix D) and give any feedback they had on the bundle or the curriculum.

Session Evaluation
We surveyed students at the end of the session to assess their personal interest in compassionate patient care, whether they felt there was value to this as a topic of medical education, and when they thought the curriculum should be taught to students. We also asked students to rate their satisfaction with the session and their likelihood of using the Kind Care Bundle again in the future.

We developed the postsession survey de novo for this pilot project, based on our specific objectives. We had two intentions for this survey. The first was to assess students’ reactions to the session in terms of its value, organization, and clarity. Second, we were interested in students’ suggestions for improvement given the pilot nature of the session and our aim to improve the experience iteratively for future students. The survey included both quantitative Likert scales and open-ended qualitative responses. The survey was administered on paper by the session leader (Cynthia Cooper), who left the students alone to complete it anonymously. Surveys were collected at each session but not analyzed until after the completion of all five sessions.

Data Analysis
Surveys were voluntary and anonymized with no identifiable information. We summarized quantitative data in Microsoft Excel and tabulated results from the survey for workshop organization and relevance. We also determined students’ level of interest in the topic and intention to use the bundle again in the future.

We analyzed qualitative data from the free responses using Microsoft Word. Using mixed inductive-deductive qualitative content analysis, Cynthia M. Cooper organized qualitative responses into key themes. Themes were derived deductively from our objectives and hypothesis about how the session could influence medical students and also arose inductively from the data. Key themes were combined into major categories reviewed by Galina Gheihman and agreed upon by consensus.

Our analytical approach was exploratory rather than theory-driven given the pilot nature of this study.

Ethical Approval
Ethical approval was obtained from the Harvard Medical School Academy, which reviewed the proposal and approved the study. The study was deemed quality improvement and waived from formal institutional review board evaluation.

Results
Thirty-seven of 40 participating first-year students (93%) completed the voluntary evaluation survey.

Session organization was evaluated as excellent by 27 of the 37 respondents (73%) and as very good by nine of them (27%). Session relevance was rated as excellent by 30 of the respondents (81%) and as very good by six (16%). Personal interest in the topic was rated as high by 24 of the respondents (65%) and as moderate by nine of them (24%). The majority of students either strongly agreed (28 of 37, 76%) or agreed (five of 37, 14%) that the curriculum should be taught to all first-year medical students.

Students reported that the bundle filled an educational gap. Some of the major qualitative themes included (1) an appreciation of the sessions’ emphasis on concrete behaviors, (2) the importance of practicing the bundle and the guiding questions, and (3) the personal impact of reflecting on one’s own experience of compassion. The Table lists all the key themes and includes supportive quotations for each theme.

A majority of students reported that they could imagine using the Kind Care Bundle in their future clinical clerkships almost always (30 of 37, 81%). Students’ motivations for using the bundle again in the future included (1) impact on patient experience, (2) clinical success, (3) fulfilling professional ideals, and (4) self-care. Students did not suggest any major changes to the curriculum, and the pilot was not significantly altered between sessions.

Discussion
We developed the Kind Care Bundle—a collection of concrete verbal and nonverbal behaviors for showing compassion in patient interactions—and taught it to preclinical medical students as part of the Kind Care Curriculum. This curriculum invited students to reflect on personal experiences of compassionate care, recall examples observed in the clinical setting, and interview hospitalized patients about their experiences.
with compassionate care. We also taught students a bundle of concrete verbal and nonverbal behaviors they had the opportunity to try out during the session. Students rated the experience as well organized and highly relevant to their current and future training. They believed the bundle filled an educational gap and helped them to reconnect to the importance of empathy and compassion in medical care, as well as to practice concrete behaviors for showing kindness to patients.

While medical educators implicitly value the importance of professionalism and kindness in patient interactions, rarely are compassionate behaviors explicitly discussed, formally taught, or evaluated in medical school or subsequent clinical training. The Kind Care Curriculum offers an innovative educational activity that prompts students to draw on their own experiences of compassionate care, teaches and reinforces compassionate instincts by providing a bundle of concrete behaviors to improve student-patient interactions, and gives students an opportunity both to test-drive this bundle during a patient encounter and to reflect on the experience.

In this educational intervention, we targeted students prior to their formal clinical training in order to establish good habits of compassionate care. Many students noted that they would use the Kind Care Bundle again in their upcoming interactions with patients and felt that it offered a universal approach for treating all patients with compassion. We wanted not only to give students the knowledge why this was important but also to start modifying their attitudes and equip them with skills for kind, compassionate care. Thus, the curriculum offered opportunities for reflection on students’ own prior experiences, as well as on the impact of using the bundle with patients. Students’ free responses indicated they were connecting with values of empathy, professional fulfillment, and personal well-being as a result of the personal reflection prompted during the session.

Furthermore, we wanted students to develop concrete skills to utilize. The session provided an opportunity for students to observe the bundle in action (in the role-play in the first hour), to practice engaging in the behaviors (with patients in the second hour), and to reflect on this experience, thereby connecting their new learning with its impact on patients. The curriculum’s combination of knowledge, skills-based practice, and reflection was highly rated by preclinical students and may have use in other trainee populations, clinical settings, and institutions.

We learned several additional lessons from our experience with the implementation of this pilot curriculum. First, learners may be reluctant to reflect on past experiences of vulnerability and compassion in front of their peers. To create a safe psychological space, it may be necessary for the session leader to have personal narratives of compassionate care at the ready to share at the start of the session. In our implementations, the facilitator thought ahead of time about examples to mention

| Theme                          | Representative Quotations                                                                 |
|-------------------------------|------------------------------------------------------------------------------------------|
| Concrete suggestions for     | “Such little effort for such a big impact on the patients.”                              |
| compassionate care            | “It’s hard to teach ‘being kind’... but these types of concrete actions/words can be useful and important to put into action.” |
| Practicing the bundle and     | “This session provided concrete ways by which we can engage with patients in a compassionate manner.” |
| guiding questions             | “Executing the bundle and talking with patients about their experiences with hospital care.” |
| Timing of the session         | “Being able to enact recommendations immediately solidifies that knowledge.”              |
| Establishing good habits      | “Getting the patient’s perspective on Kind Care is clutch.”                               |
| Filling a gap in their       | “This was profoundly useful, especially [as we] begin on the wards.”                     |
| education                     | “Would have been great tips to start with during Practice of Medicine [first-year longitudinal course teaching foundational history taking and physical exam skills] at the very beginning.” |
| Personal impact               | “It would be wonderful to have a similar session early in the year as most of these things can be done even without any clinical knowledge.” |
|                              | “These are habits we will use for our entire careers—and many of our classmates could use some help learning these skills.” |
|                              | “Compassion is the name of the game as it relates to patient care, so I should always use this.” |
|                              | “I think the topics covered here are often forgotten in the process.”                    |
|                              | “We are constantly told that the way to succeed on the wards is to be useful and this helped me concrete suggestions.” |
|                              | “Being a kind person is as important as understanding medicine. Uworld [online tool for studying for board exams] won’t teach you to offer someone a blanket.” |
|                              | “I feel ‘re-energized’ after being more compassionate.”                                   |
|                              | “Very useful and important to keep in mind when facing burnout.”                         |
|                              | “I want to not forget the patient is a person prior to being a patient.”                 |
|                              | “A light bulb went off! I was like ‘duh’ that’s how we need to treat patients.”          |
and drew upon them if the students were reluctant to share. We also found that students were more forthcoming in the larger group if they first had a chance to interact in a smaller, intimate setting. We asked students to share their thoughts with a partner prior to opening the discussion to the larger group for this reason. For the brainstorming related to Educational Objective 2 (i.e., when learners were recalling their clinical experiences with compassionate care), we found that the facilitator could organize the whiteboard in real time into columns of verbal and nonverbal behaviors corresponding to the Three E’s of entrance, encounter, and exit. This allowed a smooth transition from group brainstorming to the introduction of the Kind Care Bundle that followed. A central component of the success of this intervention is the opportunity for students to interview patients. We found that selecting patients ahead of time was necessary. Patients were chosen from among the general medical floors at the hospital, were informed about the session, and provided consent. This made it easier for first-year students to visit with them subsequently and facilitated deeper discussion. The richness of individual patients’ responses to the guiding questions varied significantly. A brief introduction to the aims of the session during patient recruitment enhanced patients’ subsequent comfort and willingness to share openly with learners. Through the course of the five sessions, learners identified additional behaviors for demonstrating care, ranging from finding a patient’s remote control to adjusting the shades on a bedside window. Future iterations of the Kind Care Curriculum could be adapted to include these caring behaviors.

Limitations of this pilot study include the small sample size, limited scope of the evaluation, and restriction to a single clinical site and medical school. Despite a small sample, we had a high response rate and received feedback from almost the entire cohort of participants. It is unclear whether these results generalize to other clinical sites at our institution, other medical schools, or other trainee populations (e.g., residents and fellows). Both the generalizability of this intervention and its longer-term impact on students’ behaviors and patient interactions require further study. A strength is that the session was mandatory for all students rather than elective, limiting the potential bias of interested students self-selecting into receiving the curriculum. We did not validate our survey formally to ensure students’ accurate interpretations of our questions. Future studies can help validate our survey tool or be repeated using validated survey instruments measuring empathy in medicine.32

Patients recruited for the sessions were a convenience sample of medicine inpatients chosen for being English speaking, oriented, conversant, and willing to participate. A broader sampling of patients could have altered students’ experiences; patients not meeting these criteria might have different experiences of compassionate care. We did not formally survey patient participants about their experiences with students’ use of the bundle. Informal interviews indicated that patients appreciated the opportunity to speak with students and share their experiences.

This pilot initiative was proof-of-concept that preclinical medical students could learn and appreciate a bundle of concrete behaviors for demonstrating kind, compassionate care at the bedside. Further study could involve the effect of this intervention on students’ well-being,12 on their sense of connectedness with patients, on the persistence of their sense of compassion over time, and, ultimately, on patients’ care experiences. We believe emphasizing kindness and compassionate care in trainees can augment patients’ experience of care. This in turn may help reconnect students with the values that brought them to medicine, reducing burnout and bolstering career satisfaction and joy in work among trainees and practicing clinicians alike.33 Indeed, teaching kindness in the clinical setting could have a reverberating and reinforcing effect, promoting kindness in all types of interactions across a medical school or other clinical institution,34 as well as empathy and wellness.

Next steps for this project include completing follow-up longitudinal surveys to determine the durability of the curriculum and students’ use of the Kind Care Bundle over time in their clinical training. We are also expanding the pilot to all preclinical students at the medical school and will be able to assess its reproducibility within other clinical settings at our institution. Future work could include adapting the intervention to populations at different levels of clinical training (e.g., residents, fellows, and attending physicians) and at other institutions.

Appendices

A. Kind Care Bundle.docx
B. Facilitator Guide.docx
C. Guiding Interview Questions.docx
D. Evaluation Survey.docx

All appendices are peer reviewed as integral parts of the Original Publication.
Cynthia M. Cooper, MD: Assistant Professor of Medicine, Harvard Medical School; Associate Physician, Department of Medicine, Massachusetts General Hospital

Galina Gheihman, MD: Resident, Departments of Neurology, Brigham and Women’s Hospital and Massachusetts General Hospital; ORCID: https://orcid.org/0000-0003-1599-3271

Acknowledgments
Drs. Cynthia M. Cooper and Galina Gheihman contributed equally to this work and are co-primary authors.

The original idea for this pilot was presented at a meeting of the Center for Educational Innovation and Scholarship at Massachusetts General Hospital—we thank our colleagues for this discussion and their contributions. The Patient and Family Advisory Council at Massachusetts General Hospital also provided valuable feedback on the design of the Kind Care Bundle and this study. We acknowledge and thank Dr. Arabella Simpkin Begin for her mentorship and advising throughout the development of the project and for her review of earlier versions of the manuscript.

Disclosures
None to report.

Funding/Support
None to report.

Prior Presentations
Cooper CM, Gheihman G. Teaching the “Kind Care Bundle” to medical students—a transition towards compassionate care. Poster presented at: Harvard Medical School Academy Medical Education Day; December 11, 2018; Boston, MA.

Gheihman G, Cooper CM. Teaching the “Kind Care Bundle” to medical students—a transition towards compassionate care. Poster presented at: 79th Annual Soma Weiss Medical Student Research Day; March 12, 2019; Boston, MA.

Ethical Approval
The Harvard Medical School Academy approved this study.

References
1. Kahn MW. Etiquette-based medicine. N Engl J Med. 2008;358(19):1988-1989. https://doi.org/10.1056/NEJMmp0801863

2. Swayden KJ, Anderson KK, Connelly LM, Moran JS, McMahon JK, Arnold PM. Effect of sitting vs. standing on perception of provider time at bedside: a pilot study. Patient Educ Couns. 2012;86(2):166-171. https://doi.org/10.1016/j.pec.2011.05.024

3. Lichstein PR, Atkinson HH. Patient-centered bedside rounds and the clinical examination. Med Clin North Am. 2018;102(3):509-519. https://doi.org/10.1016/j.mcn.2017.12.012

4. Barry MJ, Edgman-Levitan S. Shared decision making—the pinnacle of patient-centered care. N Engl J Med. 2012;366(9):780-781. https://doi.org/10.1056/NEJMp1109283

5. Mann RK, Siddiqui Z, Kurbanova N, Qayyum R. Effect of HCAHPS reporting on patient satisfaction with physician communication. J Hosp Med. 2016;11(2):105-110. https://doi.org/10.1002/jhm.2490

6. Hundert EM, Hafferty F, Christakis D. Characteristics of the informal curriculum and trainees’ ethical choices. Acad Med. 1996;71(6):624-642. https://doi.org/10.1097/00001888-199606000-00014

7. Woloschuk W, Harasym PH, Temple W. Attitude change during medical school: a cohort study. Med Educ. 2004;38(5):522-534. https://doi.org/10.1046/j.1365-2929.2004.01820.x

8. Dyrybe LN, Massie FS, Eacker A, et al. Relationship between burnout and professional conduct and attitudes among US medical students. JAMA. 2010;304(11):1173-1180. https://doi.org/10.1001/jama.2010.1318

9. Dyrybe LN, Shanafelt TD, Sinsky CA, et al. Burnout among health care professionals: a call to explore and address this underrecognized threat to safe, high-quality care. National Academy of Medicine. July 5, 2017. Accessed May 25, 2018. https://doi.org/10.31478/2017070b

10. Hojat M, Vergare MJ, Maxwell K, et al. The devil is in the third year: a longitudinal study of erosion of empathy in medical school. Acad Med. 2009;84(9):1182-1191. https://doi.org/10.1097/ACM.0b013e3181b17e55

11. Patel S, Pelletier-Bui A, Smith S, et al. Curricula for empathy and compassion training in medical education: a systematic review. PLoS One. 2019;14(8):e0221412. https://doi.org/10.1371/journal.pone.0221412

12. Weingartner LA, Sawning S, Shaw MA, Klein JB. Compassion cultivation training promotes medical student wellness and enhanced clinical care. BMC Med Educ. 2019;19:139. https://doi.org/10.1186/s12909-019-1546-6

13. 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. https://doi.org/10.1001/archinternmed.2012.3199

14. Trzeciak S, Roberts BW, Mazzarelli AJ. Compassionomics: hypothesis and experimental approach. Med Hypotheses. 2017;107:92-97. https://doi.org/10.1016/j.mehy.2017.08.015

15. Schwenk TL. Physician well-being and the regenerative power of caring. JAMA. 2018;319(15):1543-1544. https://doi.org/10.1001/jama.2018.1539

16. Rock L, Gadmer N, Arnold R, et al. Critical care communication skills training for internal medicine residents. MedEdPORTAL. 2015;11:10212. https://doi.org/10.15766/mep_2374-8265.10212

17. Kesselheim J, Garvey K, Sectish T, Vinci R. Fostering humanism and professionalism in pediatric residency training. MedEdPORTAL. 2010;6:7906. https://doi.org/10.15766/mep_2374-8265.7906
18. Kesselheim J, Atlas M, Adams D, et al. Humanism and professionalism for pediatric hematology-oncology fellows (HP-PHO). MedEdPORTAL. 2013;9:9607. https://doi.org/10.15766/mep_2374-8265.9607

19. Bauchat J, Park C, Santos J, Anderson L. Simulation-based empathetic communication curriculum. MedEdPORTAL. 2016;12:10336. https://doi.org/10.15766/mep_2374-8265.10336

20. Seymour P, Watt M, Mackenzie M, Gallea M. Professional Competencies Toolkit: using flash cards to teach reflective practice to medical students in clinical clerkship. MedEdPORTAL. 2018;14:10750. https://doi.org/10.15766/mep_2374-8265.10750

21. Glod SA, Richard D, Gordon P, et al. A curriculum for clerkship students to foster professionalism through reflective practice and identity formation. MedEdPORTAL. 2016;12:10416. https://doi.org/10.15766/mep_2374-8265.10416

22. Wagner L, Roth L. Reflective narrative exercise. MedEdPORTAL. 2015;11:10238. https://doi.org/10.15766/mep_2374-8265.10238

23. Chen I, Forbes C. Reflective writing and its impact on empathy in medical education: systematic review. J Educ Eval Health Prof. 2014;11:20. https://doi.org/10.3352/jeeph.2014.11.20

24. Mann K, Gordon J, MacLeod A. Reflection and reflective practice in health professions education: a systematic review. Adv Health Sci Educ Theory Pract. 2009;14(4):595-621. https://doi.org/10.1007/s10459-009-9090-2

25. Taylor DCM, Hamdy H. Adult learning theories: implications for learning and teaching in medical education: AMEE Guide no. 83. Med Teach. 2013;35(1):e1561-e1572. https://doi.org/10.3109/0142159X.2013.828153

26. Kolb DA, Fry RE. Toward an Applied Theory of Experiential Learning. MIT Alfred P. Sloan School of Management; 1974.

27. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Res Methodol. 2013;13:117. https://doi.org/10.1186/1471-2288-13-117

28. Strauss A, Corbin J. Basics of Qualitative Research: Grounded Theory Procedures and Techniques. Sage Publications; 1990.

29. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005;15(9):1277-1288. https://doi.org/10.1177/1049732305276687

30. Launer J. On kindness. Postgrad Med J. 2008;84(998):671-672. https://doi.org/10.1136/pgmj.2008.076729

31. Pavlic A, Liu D, Baker K, et al. Behind the curtain: the nurses’ voice in assessment of residents in the emergency department. West J Emerg Med. 2019;20(1):23-28. https://doi.org/10.5811/westjem.2018.10.39821

32. Hemmerdinger JM, Stoddart SDR, Lilford RJ. A systematic review of tests of empathy in medicine. BMC Med Educ. 2007;7:24. https://doi.org/10.1186/1472-6920-7-24

33. West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. Lancet. 2016;388(10057):2272-2281. https://doi.org/10.1016/S0140-6736(16)31279-X

34. Suchman AL, Williamson PR, Litzelman DK, et al.; Relationship-Centered Care Initiative Discovery Team. Toward an informal curriculum that teaches professionalism. J Gen Intern Med. 2004;19(5):501-504. https://doi.org/10.1111/j.1525-1497.2004.30157.x

Received: October 10, 2020
Accepted: February 1, 2021
Published: April 14, 2021