Educating for Professionalism: Trainees’ Emotional Experiences on IM and Pediatrics Inpatient Wards

Deborah L. Kasman, MD, MA, Kelly Fryer-Edwards, PhD, and Clarence H. Braddock III, MD, MPH

Purpose. To assess day-to-day emotions and the experiences that trigger these emotions for medical trainees in hospital settings. The overarching goal was to illuminate training experiences that affect professional behaviors of physicians.

Method. This qualitative study, conducted April–June 2000, used semistructured, open-ended interviews, observations by a non-participant, and a self-report task at two inpatient services (internal medicine and pediatrics) at different hospitals within a single academic institution in the northwestern United States. Twelve team members, including medical students, interns, residents, and attendings, were invited to participate. Ten completed all aspects of the study. Interviews were conducted before and after a one-week period of non-participant observations and self-report tasks. The authors grouped emotional experiences into “positive” or “difficult” emotions. Data were analyzed for coherent themes using grounded theory and content analysis.

Results. Positive emotions included gratitude, happiness, compassion, pride, and relief, and were triggered by connections with patients and colleagues, receiving recognition for one’s labors, learning, being a part of modern medicine, and receiving emotional support from others. Difficult emotions included anxiety, guilt, sadness, anger, and shame and were triggered by uncertainty, powerlessness, responsibility, liability, lack of respect, and a difference in values. Tragedy and patients’ suffering was the only trigger to elicit both positive (compassion) and difficult (sadness) emotions.

Conclusion. This study identified common and important emotions experienced by medical trainees and the common triggers for these emotions. Understanding trainees’ experiences of uncertainty, powerlessness, differing values, and lack of respect can guide education program designs and reforms to create an environment that fosters professional growth. Acad. Med. 2003;78:730–741.
negative attitudes in their workplaces,\textsuperscript{11} and prevent suppression of their immune systems, coronary artery disease, and cancer.\textsuperscript{12}

Self-reflection is a means to managing one’s own emotions and also facilitates professional and personal growth.\textsuperscript{3,13,14} Many educational strategies have used reflective exercises in medical training. These strategies aim at enhancing clinicians’ understanding of their emotional responses to patients and colleagues, clarifying personal meaning in one’s profession, and promoting empathy with patients’ experiences.\textsuperscript{15–22} Nonetheless, it is difficult to address emotions through self-reflection in training, for many reasons. Emotions are heightened for learners, who are assuming greater levels of responsibility while trying to master a wealth of information. In addition, overwhelmed trainees tend to suppress emotions\textsuperscript{23,24} which has potentially unhealthy consequences.\textsuperscript{25–27}

The educator is also challenged when evaluating these interventions because of a lack of consensus regarding which outcomes are appropriate markers of success.\textsuperscript{28–30} Thus far, evaluations of reflective curricula have been more likely to focus on external outcomes such as the American Board of Internal Medicine’s measures of a trainee’s humanity, knowledge of ethics, and specific communication skills.\textsuperscript{31} At the present time, none of these standardized scales addresses a trainee’s emotions or internal aspects of professional growth.

Despite increasing efforts to address professionalism, current medical curricula still perpetuate problems of moral erosion and cynicism for physicians-in-training.\textsuperscript{32,33} The consistency of outcomes such as cynicism, derogatory comments, and anger found in medical training raises a question about whether these experiences are natural consequences of training\textsuperscript{32} or are modifiable components with lasting effects on physicians’ moral and professional development.\textsuperscript{29,40–43} Perhaps a clinician’s emotions and internal experiences require greater emphasis in training, yet educators may choose to avoid the emotions of trainees, even during reflective interventions, because they feel unprepared for the responses that these exercises elicit. Maybe before educators can train reflective, professional physicians, we must first understand the events and experiences that trigger various emotions in medical training.

No prior study has explored the full range of emotions for medical trainees, or the experiences that trigger them. Studies to date have focused almost exclusively on “negative” emotions such as depression, anger, and burnout,\textsuperscript{34–39} leaving the broader range of “ordinary” emotions and the events associated with them unexamined. The goal of our study was to assess both “positive” and “difficult” emotions that occur for medical trainees within an inpatient setting, using the findings to create a taxonomy of emotions and their triggers from which educational interventions and evaluation tools can be developed.

We conducted a qualitative study to address the questions, “Which emotions are commonly experienced during inpatient rotations for medical trainees?” and “Which events trigger these emotions?” By investigating these questions, medical educators may gain useful information regarding emotional experiences of trainees on their journey to becoming physicians.

**METHOD**

**Participants**

We approached residency directors from two different primary care programs, pediatrics and internal medicine, in one academic system in the Northwestern United States. Each director chose one ward team based on optimal gender balance of trainees. All members of designated ward teams—medical students through attending physicians—were invited to participate, and those who elected to participate gave informed consent to one of us (DK). The procedures in our study and our consent form were reviewed and approved by the participating hospitals’ human subjects review committees. All seven members on the pediatrics team agreed to full participation in April 2000. Of the five members on the internal medicine team, three agreed to full participation and two agreed to partial participation in June 2000. Varying participation reflected added demands for trainees at the end of their academic year. Ten participants completed the entire study and received modest compensation.

The participants varied in age, ethnicity, and academic background. Ten participants were Caucasian, two were biracial, nine were partnered, and three were single. Six of the medical trainees were men and four were women. Both attending physicians were men. Undergraduate majors of the participants varied widely and included anthropology, English, biology, psychology, economics, and Chinese. The third-year residents were going on to specialty training in dermatology and hematology/oncology, and the medical students were pursuing residencies in emergency medicine, dermatology, and internal medicine. In this paper, we changed the participants’ names to maintain their anonymity.

**Study Design**

Data collection was triangulated through interviews, observations, and a self-report exercise to enhance trustworthiness. DK interviewed ten full participants in two semistructured, open-ended interviews that each lasted 60–90 minutes. The first interview occurred before the observations and self-report tasks. Participants discussed experiences in which they were “moved
by” or “took pause with” patients, staff, mentors, or colleagues. A second interview occurred following the observation/self-report week. Early analysis of the participants’ emotional traits and styles was confirmed, revised, and validated during the second interview. We also explored participants’ learning styles, support systems, and coping strategies in the second interview. All interviews were tape recorded and transcribed.

All 12 invited participants agreed to non-participant observations by DK. Participants were observed at different times of the day and night and on weekdays and weekends throughout a breadth of ward duties. In total, DK spent 26 hours with the pediatrics team and 17 hours with the internal medicine team. The total number of hours spent with each team was influenced by the number of team participants and the specific features of the teams’ call schedules. Detailed observation notes were written on site, dictated shortly afterwards, and transcribed.

Medical trainees (eight full and one partial participant) completed the self-report task during the observation week, recording personal responses to emotional experiences as they occurred. We did not ask the attending physicians to perform this task because our study’s primary focus was on trainees. The self-report task was modeled on the “experience sampling method” described by Mihaly Csikszentmihalyi, where participants record feelings prompted by an alarm. Because medical trainees have an aversive reaction to alarms and beepers, the participants were asked to record their feelings and what had evoked them via Dictaphone at three suggested times each day for five consecutive work days. Participants varied in their responses and recorded emotional experiences at least twice daily for four to six working days. Taped self-reports (varying in length from 20 to 45 minutes each) were transcribed.

Data Analysis

Transcripts of interviews, observation notes, and self-reports were analyzed using grounded-theory methods. We used standard data management tools. One of us (CB) coded 50% of the data into large themes, while DK used a line-by-line coding technique for all first interviews and self-report transcripts. In the early stages of analysis, DK and CB discussed, debated, and agreed on five major categories of emotional triggers surfacing from the data. DK assigned micro-codes for each passage reflecting either a general emotional trigger, a patient care issue, an learner issue, a teaching issue, or a concern about self-image, identifying a total of 406 micro-codes. DK grouped the 406 codes into exhaustive categories, resulting in 30 specific groups of emotional triggers. These 30 groups of emotional triggers were then related back to the original five general categories (see Appendix A). For simplicity, each of the 30 groups is henceforth called “an emotional trigger.” CB and KFE reviewed and concurred with the new categories of emotional triggers.

Five of the ten full participants agreed to review the analysis and each concurred that the specific emotional triggers were comprehensive and representative of their experiences. The other five full participants who did not give feedback either could not be reached because they had moved after residency or had personal and work commitments and could not offer their time.

DK also completed line-by-line coding for emotions using the participants’ own words to arrive at 165 different expressions for emotions. In total, 475 expressions of emotional experiences occurred in passages coded for emotions. To simplify codes for emotions, two source books were compared and combined into 17 “classic” emotions delineated by experts in the study of emotions. The 475 emotional experiences were re-coded for one of the 17 emotions, as well as one of the 30 specific emotional triggers, resulting in emotional trigger-to-emotion pairs (see Appendix A). KFE reviewed 10% of the emotion/emotional triggers pairs and each singular emotion/emotional trigger pair that occurred for individual participants. DK and KFE concurred on over 95% of the passages and the remaining few were discussed and resolved by consensus. Two of the five participants who gave feedback also saw the final analysis including emotions and emotion-to-emotional trigger pairs. Both concurred that the emotion-to-emotional trigger pairs were comprehensive and representative of their experiences, with one participant suggesting that gratitude, although truly present and significant, may have been quantitatively overrepresented in this sample.

DK undertook a secondary analysis and divided emotions into “positive” emotions, defined as emotions that might feel good to trainees that educators might encourage on the wards, and “difficult” emotions, defined as emotions that are more likely to not feel good to trainees that educators might address through curricular interventions. CB and KFE concurred with the division of specific emotions into positive and difficult classifications.

Results

Emotions

Participants expressed 15 of the 17 emotions determined by the lists from the expert sources. Expressions of love and jealousy were not evident in our study. In Figure 1, each of the 15 emotions is shown as a percentage of total experiences analyzed. Gratitude (16.4%) and anxiety (15.2%) were expressed most frequently. Positive and difficult emotions were closely divided (240 to 235, respectively) among experiences.
Emotions (see text). Jealously were not evident. For more information, from expert sources.

Emotion/emotional trigger pairs were dominant during our analysis of initial interviews and self-reports: patient care, learners’ issues, managerial issues, personal vulnerabilities, and professional identity. Learners’ issues included teaching and learning. Managerial issues included administrative tasks and multitasking duties. The pediatrics team expressed more learners’ issues and the internal medicine team expressed more managerial issues. Personal vulnerability included issues of self-doubt and interactions with colleagues or mentors, and professional identity included ethics, growth as a physician, and finding meaning.

Emotion/emotional trigger pairs were ranked for incidence as very frequent (occurring at least ten times), frequent (occurring four to nine times) and less frequent (occurring one to three times) (see Appendix A). We conducted an analysis to see whether all participants expressed the very frequent emotion/emotional trigger pairs or if one participant continued to express this pair many times. There was some variation in individual expression. Nearly all participants expressed happiness over patients’ improving or over connecting with patients, with the exception of two participants who made several clear expressions of burnout or depression at the time of our study. Nearly all participants expressed sadness over patients’ getting worse or tragedy, with the exception of two participants who made clear statements concerning their choice to use humor as a coping technique. Gratitude was expressed for either joy of learning or honor of being in medicine, and guilt was expressed for either lack of control/knowledge or responsibility, by different participants. When these similar triggers were combined, they were expressed by all participants and were labeled “high-frequency sets.” Anxiety for high workloads occurred very frequently, but only among the six medical students and interns. Anger over a lack of respect was noted by all of the trainees, but not by attending physicians. When anger and disgust were combined for differences in values with patients and colleagues all participants were included, but neither emotion alone was expressed very frequently (over ten times). Because individual variations could be accounted for within our analysis, 12 pairs or sets of emotions/emotional triggers were found to occur very frequently and within the majority of participants. These were called “high frequency” pairs or sets (see Table 1 and Appendix B).

Emotion/emotional trigger pairs were also analyzed independently of frequency and found to describe a range of positive and difficult emotions for opposing triggers such as connecting versus not connecting with colleagues and patients (see Figure 2). Patients’ tragedy and suffering was the only trigger to elicit both positive (compassion) and difficult (sadness) emotions.

High-frequency Positive Emotion/Emotional Trigger Pairs

Compassion was expressed most frequently for one emotional trigger: patient tragedies, worsening health, or suffering by patients and families. Resident Nancy shared her feelings about a baby dying from liver failure:

She had these very expressive eyes...You could tell when she was having pain [or] when she was happy. It just struck me that she had a twin sister who was doing fine...I felt like fate had handed her the wrong card ... I felt bad for her sister because her sister is probably going to think the same thing for a long time.

Gratitude was expressed for three separate emotional triggers: opportunity to become a physician/joy of learning, receiving emotional support, and recognition. Resident Sam explained:

When all is said and done, I really do find it an honor to go and do this work...You’re walking in the footsteps and... tradition of service that goes back.

Happiness and pride were expressed when participants connected with patients or acquired patients’ trust, or when patients improved. Intern Keith stated:

I have a sense of joy or happiness when I [speak] to a six-year-old little girl with Down’s syndrome who is very fussy and uncooperative. Whenever I come into the room she sticks out her tongue at me and blows it at me and then I do it back to her. We do this back and forth. Her adopted mom said that she actually only does this with “people that she likes,” which brought a smile to my face.
Anxiety was the most frequent difficult emotion that occurred for the emotional trigger: uncertainty, powerlessness, and loss of control. Resident Sam described:

I always panic initially when I get called to do something new and I don’t know what the heck is going on with the kid or how to treat whatever the problem is.

Sadness was very frequently expressed for the emotional trigger: patient tragedy, worsening or suffering. Attending Robert stated:

There was the murder of one family, 15 years ago... the father, mother and kids were stabbed to death, but the kids lingered on for a while. So that was a very searing experience... overwhelming sadness.

Guilt was very frequent for lack of control or knowledge and perceived responsibility for poor outcomes. Intern Jane explained:

[The patient] had just stoked out, and it was a big stroke. I was devastated... I thought it was my fault. We had started the coumadin without heparinizing him... He threw a clot... I ran into his family who were all completely cheerful and supportive, [saying] “Oh, thank you so much for taking care of him” and I’m feeling like, “Oh, I killed him.”
Anger and disgust occurred often for perceived lack of respect. Resident Allen clarified:

Angry would be the appropriate description of my feelings right now. I’m extremely upset with the nursing staff who have not only ignored our orders, but have made disparaging and erroneous remarks about my intern to a patient.

**DISCUSSION**

Our study of frequent everyday emotions and their triggers for two ward teams in primary care specialties yielded information about the emotional landscape of medical training. Positive emotions experienced during ward training included gratitude, happiness, compassion, and pride. Common triggers included recognition, emotional support, connecting with patients, acquiring patients’ trust, and empathy with patients’ suffering. From these results educators might increase positive experiences for trainees by promoting recognition of tasks well done; encouraging emotional support for trainees; enhancing connections with patients, mentors, and colleagues; and concurring with current precepts for professional competence and competency-based curricular reforms. Recognition of trainees can be promoted by new strategies such as “praise cards, which are currently successfully used at a few institutions. Trainees could receive ongoing support by assigning them personal mentors, implementing Balint or peer support groups, or requiring curricular reflective exercises, creative writing, or stress reduction exercises. Faculty members could also be trained to facilitate discussions of difficult emotions faced by students, interns, and residents. They could invite discussions of personal values and means to negotiate care when there is a difference in values between patient and clinician, or between different members of the care team. These discussions could augment humanistic...
connections within teams and invite tolerance for differing emotions and values of patients and colleagues. Faculty members have been perceived to display humanistic traits only 46% of the time and are often unaware of learners’ needs, therefore, these changes cannot occur without a concerted effort to appropriately train the faculty. Faculty development has not yet been comprehensively embraced in any medical school, yet it could facilitate positive recognition of trainees and redirect attention to learners’ needs.

Difficult emotions in our study included anxiety, guilt, sadness, and anger. These emotions were triggered for all participants, including attending physicians, by experiences involving uncertainty, powerlessness, lack of respect, differing values, and overwhelming patient suffering. Difficult emotions in training are rarely handled in most curricula. Medical schools primarily address emotions associated with death and dying by focusing on pain management, death anxiety, and the quality of the patient’s life. A curriculum to formally address trainees’ emotions or sadness when patients die occurs rarely during clinical years. Reflective writing, support groups, and enhanced death-and-dying curricula can offer opportunities to discuss sad feelings inherent in the practice of medicine.

The consistency of anxiety and guilt among all participants triggered by uncertainty, powerlessness, and perceived responsibility for untoward outcomes was striking. Although learning is enhanced by a certain amount of anxiety, an excessive amount becomes detrimental to learning and can lead to maladaptive coping behaviors, including avoidance, hiding the truth, and derogatory comments toward patients and colleagues. Poor coping strategies demonstrated in other studies have short-term and long-term adverse consequences for patient care and provider well-being. Educators are challenged to help trainees cope positively with anxiety and guilt by discussing these experiences. Uncomfortable emotional experiences may represent the “uninvited” guests that Epstein challenged us to invite into our learning environments. Rather than pushing these concerns and emotions into the hidden curriculum, it may be time to squarely address the uncertainty, powerlessness, and fallibility inherent in medicine. If this is achieved, guilt can be redirected to positive actions for improving patient care. To effectively discuss these experiences, faculty members must first become comfortable with their own uncertainty, powerlessness, and fallibility.

Anxiety resulting from heavy workloads was strongest among the medical students and interns. Workloads are currently addressed by patient load caps and night-float teams. Another innovative approach could be for senior residents to share time-management strategies with junior trainees in a formalized seminar setting, or to bring time-management specialists into consultation for medical students and interns. These interventions could possibly decrease workload anxieties and encourage stronger connections among colleagues.

Our study showed that even though patient care issues triggered four of the high-frequency emotion/emotional trigger pairs, seven of 12 high-frequency emotion/emotional trigger pairs involved trainees’ personal vulnerabilities and professional identities. This is consistent with Antonio Damasio’s conclusions that emotions are intimately connected to self and identity. This knowledge is important for educators trying to instill professional and humanistic behaviors in trainees. Rather than focus exclusively on skills needed for interacting effectively with patients, such as active listening, responding empathetically, and respecting patients’ autonomy in health care decisions, curricula in professionalism can also include activities that foster commitment to reflection, ongoing learning, and heightened respect for all members of the health care team. This requires addressing untoward behaviors on the wards, including disrespect, anger, and disgust over disparate values. It is difficult to foster humanistic practitioners in environments where disrespect and humiliating behaviors are tolerated.

Each medical institution should seek systematic changes to promote tolerance of different values and emotions, rather than blame and condescension, to unify health care workers toward a common goal—providing high-quality care to each patient. Creating opportunities to report or discuss inappropriate behaviors, and/or incidents of perceived disrespect, can facilitate these goals within academic medical centers.

This study was an exploratory, descriptive study of two ward teams in one academic institution. We studied only primary care specialties. The number of participants was too small to assess demographic differences or themes specific to each stage of training. Although the findings presented could be unique to the individuals in our study, the consistency of the themes despite variances in specialty, gender, age, and stage of training made these results intriguing for further exploration.

Using a single investigator to conduct all observations and interviews could introduce bias, yet this method promoted consistent data collection. Second and third investigators’ analyses helped offset bias. The high frequency of gratitude expressed in our study may reflect bias from questions in the first interview, where participants reported moving stories. Self-report tasks may have been biased by the first interview as well as the investigator’s presence on the wards. Nonetheless, positive and difficult experiences were
nearly equal, reflecting varied emotions likely to occur over a week, arguing against a strong methodological bias.

Qualitative studies are designed to generate hypotheses for further testing. In this regard, our study was successful in identifying themes conducive to further study. Future studies can investigate how medical students' and residents' emotions about uncertainty, powerlessness, perceived support, and recognition affect performance in patient care, as well as personal well-being. The range of positive and difficult emotions described can be used by educators to guide objectives in curriculum to match current concepts of professionalism.

Emotions are essential to learning, decision making, and caring capabilities, as recognized by the call to produce emotionally intelligent physicians. Our study was a first attempt to categorize day-to-day emotional experiences of physicians-in-training, with hopes that future work will expand on the model of positive and difficult emotional triggers, confirm results through surveys of trainees, and use themes presented here to implement and test innovative pedagogical strategies. If training emotionally intelligent physicians is a laudable goal, the results of our study can help educators explore strategies to encourage trainees' emotional competencies.

Dr. Kasman thanks Johanna Shapiro, PhD, at the University of California at Irvine Department of Family Medicine; Anthony L. Suchman, MD, at Relationship Centered Health Care in Rochester, New York; and Lynne Robins, PhD, at the University of Washington, Department of Medicine; Anthony L. Suchman, MD, at the University of California at Irvine Department of Medicine; and Reed Stevens, PhD, at the University of Washington Department of Educational Psychology, for instruction in the qualitative methods. The authors are grateful to all participants in this study for willingly and graciously sharing their personal experiences.

This study received funding from U.S. Veterans Administration grant # TPA 61-021, from a Ambulatory Care MD Postdoctoral Fellowship Grant, at the Veterans Affairs Puget Sound Healthcare Systems, Seattle, Washington.

REFERENCES


### Appendix A

#### Detailed Display of all Emotion-to-Emotional Trigger Pairs Analyzed in 475 Emotional Experiences of Internal Medicine and Pediatrics

Medical Students, Residents, and Attending Physicians from First Interviews and Self-reports, by Distribution of Pairs of Emotion/Emotional Triggers and Frequency of Occurrence at Hospitals in One Academic Institution, Northwestern United States, 2000

<table>
<thead>
<tr>
<th>Major Category</th>
<th>Specific Grouping</th>
<th>Occurred Very Frequently*</th>
<th>Occurred Frequently†</th>
<th>Occurred Less Frequently‡</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient care</strong></td>
<td>Connection, patient well-being, patient improving</td>
<td>Happiness</td>
<td>Relief</td>
<td>Hope</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pride</td>
<td>Gratitude</td>
<td>Love</td>
</tr>
<tr>
<td></td>
<td>Lack of connection, untoward thoughts</td>
<td></td>
<td>Anxiety</td>
<td>Compassion</td>
</tr>
<tr>
<td></td>
<td>Tragedy, suffering, worsening outcome</td>
<td>Compassion</td>
<td>Anxiety</td>
<td>Guilt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disgust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shame</td>
</tr>
<tr>
<td><strong>Learner issues</strong></td>
<td>Learning, teaching, contributing to team</td>
<td>Gratitude</td>
<td>Happiness</td>
<td>Pride</td>
</tr>
<tr>
<td></td>
<td>Connection with colleagues</td>
<td></td>
<td>Happiness</td>
<td>Gratitude</td>
</tr>
<tr>
<td></td>
<td>Lack of connection, inefficient learning</td>
<td>Compassion</td>
<td>Sadness</td>
<td>Relief</td>
</tr>
<tr>
<td></td>
<td>Task well done, complete stage in training</td>
<td></td>
<td>Pride</td>
<td>Happiness</td>
</tr>
<tr>
<td></td>
<td>Supervision: done well</td>
<td></td>
<td>Relief</td>
<td>Hope</td>
</tr>
<tr>
<td></td>
<td>Supervision: inadequate</td>
<td></td>
<td></td>
<td>Relief</td>
</tr>
<tr>
<td></td>
<td>Being evaluated</td>
<td></td>
<td></td>
<td>Angle</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Heavy workload</td>
<td>Anxiety</td>
<td>Depression</td>
<td>Sadness</td>
</tr>
<tr>
<td></td>
<td>Light workload</td>
<td></td>
<td>Relief</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arranging care: success</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arranging care: difficult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unable to leave hospital</td>
<td></td>
<td>Envy</td>
<td></td>
</tr>
<tr>
<td><strong>Personal vulnerability</strong></td>
<td>Emotional support from others, forgiveness</td>
<td>Gratitude</td>
<td>Relief</td>
<td>Happiness</td>
</tr>
<tr>
<td></td>
<td>Recognition from others</td>
<td></td>
<td>Pride</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of respect, not being noticed</td>
<td></td>
<td>Shame</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-care (e.g. personal time, sleep, vacation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Publicly “not knowing,” feelings less endowed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exhaustion: emotional, physical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ill friend/family member</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Professional identity</strong></td>
<td>Uncertainty</td>
<td>Anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of control, Decrease knowledge/ability</td>
<td>Guilt</td>
<td>Anxiety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Responsibility/liability</td>
<td>Guilt</td>
<td>Anxiety</td>
<td></td>
</tr>
</tbody>
</table>

*continued on next page*
### Appendix A

<table>
<thead>
<tr>
<th>Emotional Trigger</th>
<th>Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Category</strong></td>
<td><strong>Specific Grouping</strong></td>
</tr>
<tr>
<td>Helplessness, powerlessness</td>
<td>Sadness Anxiety</td>
</tr>
<tr>
<td>Conflicts in values</td>
<td>Anger Sadness</td>
</tr>
<tr>
<td>Respect for values</td>
<td>Gratitude</td>
</tr>
<tr>
<td>Choice of being in medicine</td>
<td></td>
</tr>
</tbody>
</table>

*The number of vignettes expressed ranged from 10 to 29.
†The number of vignettes expressed ranged from 4 to 9.
‡The number of vignettes expressed ranged from 1 to 3.

### Appendix B

**Examples from Internal Medicine and Pediatrics Medical Students’, Residents’, and Attending Physicians’ Study Transcripts Showing High-frequency Emotion-to-Emotional Trigger Pairs and Sets, Hospitals in One Academic Institution, Northwestern United States, 2000**

<table>
<thead>
<tr>
<th>Emotional Trigger</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive emotion</strong></td>
<td></td>
</tr>
<tr>
<td>Compassion: Tragedy, patients worsening and/or suffering</td>
<td>His [the patient’s] fear was that they would love him less. And not understand him. I think he had a feeling that he was likely going to die. And he did not want that to be the last thing he felt about them or felt in response to them, and he didn’t want them feeling that way about him. . . . Even though it’s an inconvenience to me and it doesn’t fit with way I want to practice medicine, I’m not the one who’s on the ventilator. I wasn’t the one who was concerned with my family at the last minutes of my life . . . My discomfort pales in comparison to what he was going through.</td>
</tr>
<tr>
<td>Allen,* third-year resident, internal medicine</td>
<td></td>
</tr>
<tr>
<td>Gratitude: Opportunity to learn and become physician</td>
<td>I think for me it was always treating them [dead bodies] with respect, you know, this is the gift. This is something that I get to learn from.</td>
</tr>
<tr>
<td>Henry, third-year medical student, pediatrics</td>
<td></td>
</tr>
<tr>
<td>Gratitude: Emotional support</td>
<td>I was clearly struggling, and my senior resident basically just took me aside and kind of said, “How are you doing?” At which point I just went to pieces . . . We were on call that day, she said, don’t think about us; don’t worry about us, just go to sleep . . . And that I have been, and continue to be, very grateful for. Because when I really, really needed it, someone made it clear . . . what I needed to do for myself was just get the hell out of there . . . She made it clear that that was not a problem for her.</td>
</tr>
<tr>
<td>Jane, first-year resident, internal medicine</td>
<td></td>
</tr>
<tr>
<td>Happiness: Connections with patients, patients improving</td>
<td>I have another patient who has end-stage liver disease and does wood carving. And he has end-stage liver disease and is dying of his disease, there’s really not a darn thing I can do, so now when we visit, we basically talk . . . I really respect the guy, really like the guy. He’s a very thoughtful and introspective guy, and I just enjoy spending time with him</td>
</tr>
<tr>
<td>George, attending, internal medicine</td>
<td></td>
</tr>
<tr>
<td>Pride: Connections with patients, patients’ trust, patients improve</td>
<td>That moment of him looking to me, to say “Doc, is that what we should do? Right, Doc?” And my knowing that I was doing the best thing for the patient as an advocate . . . I felt like I was able to step in and really to have elicited his trust in that way. So that was something that I walked out and said “Wow”</td>
</tr>
<tr>
<td>Jane, first-year resident, internal medicine</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

<table>
<thead>
<tr>
<th>Emotional Trigger</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gratitude: Recognition</strong></td>
<td>The attending that I worked with on medicine sent me an e-mail and was pretty complimentary about my performance in medicine. She offered to write me a letter and other things. Always nice to have somebody that is interested in you personally and also interested in your career development and that’s been a relatively infrequent event so far in my third-year clerkship. Henry, third-year medical student, pediatrics</td>
</tr>
<tr>
<td><strong>Difficult emotion</strong></td>
<td></td>
</tr>
<tr>
<td>Sadness: Tragedy, patients worsening and/or suffering</td>
<td>I felt sad today when I walked by Mr. T.’s room and saw it closed with the “wash hands before entering” sign on his door. He came into the hospital looking like a million dollars and has been tolerating radiotherapy, chemotherapy amazingly well. And now we see this iatrogenic illness come upon him with neutropenia and thrombocytopenia and anemia. It’s kind of sad seeing that. Steve, third-year medical student, internal medicine</td>
</tr>
<tr>
<td>Guilt: Feeling helpless, lack of knowledge, responsibility for perceived poor performance</td>
<td>I think the curse is at times there are people I feel like I’m not helping or can’t help. My gut reaction is to resent that in a way, and then that feeling of resentment, I think, makes me feel guilty. I guess when I talk about guilt it’s more sort of an acknowledgment of my inability to care for them, and my failure to feel like there’s really anything I can do. George, attending physician, internal medicine</td>
</tr>
<tr>
<td>Anger: Perceived lack of respect</td>
<td>It was a knock to my confidence, and it was the wrong thing to say at the time. If you’re trying to get me to figure out what to do, then the way to do it is not to bitch about how I’m not good at this. I was angry and flustered and overwhelmed. You get that a lot as an intern. When you’re a first year, they just sort of discredit you and don’t give you any credit for what you’re doing and don’t listen to you and just sort of walk all over you. Nancy, third-year resident, pediatrics</td>
</tr>
<tr>
<td>Anxiety: Uncertainty, powerlessness, loss of control</td>
<td>I’m worried—we all are—that there’s going to be something going on that we don’t know about or some untoward event just because there’s so many things happening. I’m just amazed how little there is that goes wrong. Robert, attending physician, pediatrics</td>
</tr>
<tr>
<td>Anxiety: Heavy workload</td>
<td>I’m on call. It’s been an extremely busy night. Not because of admissions but because of one incredibly sick girl who has Wilson’s disease. It’s been interesting figuring out her diagnosis but my God, it’s taking me forever. It’s driving me crazy. And now, we have another admission who just came to the floor but there is a code going on that George’s in the middle of. It’s just crazy. Helen, first-year resident, pediatrics</td>
</tr>
<tr>
<td>Anger/Disgust: perceived difference in values</td>
<td>Interviewer: What did you feel when the resident said, ‘[The patient] will die’ from the first day [you were on service]? It made me mad. In my heart I always believe that you should always have hope for patients. You can’t take away somebody’s hope or you take away their soul. Mary, third-year medical student, pediatrics</td>
</tr>
</tbody>
</table>

*Names have been changed to protect participants’ anonymity.*