

The Culture of Academic Medicine: Faculty Behaviors Impacting the Learning Environment

Christine Moutier¹ · Deborah Wingard² · Monica Gudea² · Dilip Jeste² · Seneca Goodman² · Vivian Reznik²

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Abstract

Objective The culture of academic medical institutions impacts trainee education, among many other faculty and patient outcomes. Disrespectful behavior by faculty is one of the most challenging and common problems that, left unattended, disrupts healthy work and learning environments. Conversely, a respectful environment facilitates learning, creates a sense of safety, and rewards professionalism. The authors developed surveys and an intervention in an effort to better understand and improve climate concerns among health sciences faculty at the University of California, San Diego (UCSD), a research-intensive, public, academic medical center.

Methods An online “climate survey” of all UC San Diego health sciences faculty was conducted in 2011–2012. A strategic campaign to address the behavioral issues identified in the initial survey was subsequently launched. In 2015, the climate was re-evaluated in order to assess the effectiveness of the intervention.

Results A total of 478 faculty members (223 women, 235 men, 35 % of faculty) completed the baseline survey, reporting relatively low levels of observed sexual harassment (7 %). However, faculty reported concerning rates of other disruptive behaviors: derogatory comments (29 %), anger outbursts (25 %), and hostile communication (25 %). Women and mid-level faculty were more likely to report these behavioral concerns than men and junior or senior colleagues. Three years after an institutional strategy was initiated, 729 faculty

members (50 % of the faculty) completed a follow-up survey. The 2015 survey results indicate significant improvement in numerous climate factors, including overall respectful behaviors, as well as behaviors related to gender.

Conclusions In order to enhance a culture of respect in the learning environment, institutions can effectively engage academic leaders and faculty at all levels to address disruptive behavior and enhance positive climate factors.

Keywords Learning environment · Faculty development · Workforce

The culture within academic medicine has become an area of focus in recent years [1]. The behavior of leaders in any environment shapes culture and models implicit “rules” for negotiating social exchanges within the community. This means that the behavior of faculty in academic medical centers can impact the environment powerfully in positive and negative ways. The focus on culture in medicine has encompassed two interrelated constructs of learning environment that impacts medical education and work environment within systems of care. For training hospitals, these implications of climate are particularly linked, since the environment affects experienced practitioners and junior members of the profession alike. For learning to optimally occur, both explicit medical teaching and implicitly modeled behaviors and messages by faculty have been established as critically important [2]. Current efforts at the undergraduate and graduate medical education levels have placed the learning environment at a high priority by the Liaison Committee on Medical Education [3] and for the accreditation system for residency training programs [4].

Additionally, a number of other important sequelae stem from the culture of the work environment. For the clinical enterprise, patient safety and clinical outcomes have been

✉ Christine Moutier
cmoutier@afsp.org

¹ American Foundation for Suicide Prevention, New York, NY, USA

² University of California San Diego, La Jolla, CA, USA

linked to teams' ability to communicate and function efficiently [5]. Optimal teamwork, in turn, relies on mutual trust and respect, which are relational attributes that depend not only on individual relationships but also on the overall culture of the unit or institution. The workplace climate of academic medical institutions has far-reaching implications for job satisfaction, faculty retention, employee turnover, morale, and burnout. High turnover leads to increased fiscal costs for the institution [6, 7], and burnout has been linked to numerous problems including greater risk for medical errors, diminished empathy, and unprofessional conduct [8, 9].

A culture of respect described by Leape et al. has great potential reward for medical education and healthcare systems but requires active effort and leadership to implement [10]. Transformation of the status quo to eliminate disrespectful behavior requires an expectation of professionalism that is explicitly and implicitly clear. Creating an environment of respect facilitates learning and optimal performance by trainees as well as faculty as it protects and models dignity in the workplace, creates a sense of safety, and rewards respectful collegiality and higher levels of professionalism.

For medical institutions striving for an optimal work and learning environment, disrespectful behavioral patterns are one of the most challenging and common problems that, left unattended, create problems in the work environment and disrupt healthy work relationships. Although disruptive physician behavior has been well described [11, 12], it remains a particularly vexing problem. In clinical settings, significant behavioral problems that disrupt teamwork or patient care can be referred to and addressed by the hospital's well-being committee or physician health program [13]. In 2009, the Joint Commission put forth a new standard for hospital leadership to "create and maintain a culture of safety" which included a code of conduct that "defines acceptable behavior and behaviors that undermine a culture of safety" [14]. However, problematic behaviors ranging from anger outbursts to more passive forms of impairment also occur in non-clinical settings such as research units, educational settings, and in administrative roles physicians hold. In these non-clinical settings, the pathway for addressing behavioral problems is less clear-cut. The traditional hierarchical structure of the profession has historically placed physicians in the highest positions of authority.

University of California, San Diego Health Sciences, composed of the School of Medicine and the Skaggs School of Pharmacy and Pharmaceutical Sciences, is a research-intensive, public, academic medical center, which over the last 15 years has seen significant growth in the size and diversity of the demographic makeup of the faculty. While the medical student body reached gender parity around 2000, consistent with national trends, the percent of women faculty at UC San Diego Health Sciences increased from 27 % in 2002 to 38 % in 2012. The State of California implemented

Assembly Bill 1825 in 2005, which mandated sexual harassment training every 2 years in entities with more than 50 employees. UC San Diego has created sexual harassment policies consistent with that law, institutionalized a robust Office of Prevention of Harassment and Discrimination, with training available both online and using live theater performances to engage the faculty. Health Sciences leadership has been consistent in enforcing these policies and assuring that faculty who violate UC policy are either rehabilitated or required to leave the university. Additionally, gender equity has been an ongoing focus at UC San Diego since a 2001 salary equity study led to the formation of a Gender Equity Task Force. UC San Diego Health Sciences has conducted a series of climate surveys starting in 2005 to examine changes over time and to help direct interventions to address issues identified. The present manuscript focuses on the two most recent surveys from 2011 to 2012 and 2015.

In an effort to enhance the culture of respect and develop effective approaches to behavioral problems in the workplace, our institution launched a three-phase plan:

1. First, we needed to better understand baseline concerns and perceptions among the faculty. In 2011–12, a climate survey was used to assess workplace culture.
2. Next, a multi-pronged strategy for improving the culture was developed based on the particular peer behaviors observed by faculty.
3. Three years later (in 2015), faculty were surveyed again to evaluate the effectiveness of the intervention.

Methods

The method for this study used a repeat, cross-sectional survey design.

Initial Surveys At the UC San Diego Health Sciences, the Associate Vice Chancellor for Faculty Affairs (VR) and DW developed an online climate survey in 2011, which assessed faculty perceptions about various aspects of professional life including morale, environment, resources, and behavior. Participants' identifying information was not collected, in order to encourage participation from a high proportion of the faculty and full reporting of concerns without fear of retribution. A total of 515 health sciences faculty responded to the survey, for a response rate of 37 %. The climate survey results found a level of satisfaction among UC San Diego health science faculty that, overall, was consistent with or more favorable than national averages (unpublished). For example, related to work/life balance, sense of collegiality, and having clear criteria for promotion, UC San Diego faculty noted levels of satisfaction that were more favorable than the data from a 2008

AAMC national survey of academic faculty [15]. In addition, the survey identified two institutional concerns—lack of fairness in allocation of resources (space, salary support staff) and a lack of understanding of university policies that affect work environments (salary negotiations, research space allocation, benefits, retirement, academic advancement).

The portion of the climate survey that focused on faculty perceptions of peer behaviors, however, was striking to the authors. Faculty had been asked if they had experienced or observed three or more instances of inappropriate behavior or comments in their unit within the past year. Approximately 8 % reported such inappropriate behavior related to gender, 3 % to race/ethnicity, 3 % to age, and 2 % to sexual orientation. Despite these noteworthy prevalence rates of observed behavioral issues, published data and national means for these types of observations by faculty are lacking. Because of the way the questions about behavior were asked, it was not possible to differentiate the nature of the behaviors, e.g., verbal intimidation versus sexual harassment. Therefore, in an effort to better understand the nature of behavioral issues in our community, as well to gain an estimate of the prevalence of such behaviors, the authors developed an online follow-up survey which focused on the types and frequency of behaviors faculty observed in their peers.

The follow-up survey (also anonymous) was sent in early 2012 to all health sciences faculty in 16 departments and queried observation of specific behaviors with frequency of occurrence over the past year and perceived functional impact of such behaviors. A total of 478 health sciences faculty responded to the survey, for a response rate of 35 %. Behaviors included aggression, such as anger outbursts, intimidation, or bullying, derogatory comments/jokes, hostile email or verbal communication, and unwelcome sexual innuendo or behavior. Other behavioral concerns included significant short-term memory problems and emotional lability. Functional domains included any behavior leading to diminished work productivity for that individual or for others (colleagues or staff), causing others to have to pick up the slack, jeopardizing patient care, or otherwise undermining the ability of the workplace community to thrive and function optimally. The survey also asked faculty participants the number of distinct individuals referred to in their responses, whether they knew where to report behavioral problems, and about the presence of these behavioral issues in students or staff.

Intervention Our first step was to disseminate the survey findings widely, to raise awareness. This included four university-wide presentations and 31 department chair and department meetings. Our second step was the development of workshops and faculty trainings. Just after our 2011 survey, the authors of a Culture of Respect [1] recommended a series of cultural transformations including emphasizing a faculty code of conduct that established the

expectation that everyone is treated fairly, modeling respectful conduct, education students, staff and faculty on appropriate behavior, and providing counseling and training when needed [1]. At UC San Diego, we used the existing University Faculty Code of Conduct in conjunction with UC San Diego Health Sciences Policy and Procedure Code of Conduct-Disruptive Physicians and Staff, which outlines the array of unprofessional behaviors similar to those described by Leape et al. [1]. Our strategies included early identification of problematic behaviors, dissemination of appropriate policies, training of faculty leadership to provide the essential skills for addressing the challenges of working with and supervising disruptive individuals in the health care environment, and faculty development workshops to give faculty a better understanding of how policies affect their work environment [research space allocation, salary structure and negotiation, benefits, retirement] as well as those described by Binder et al. [15].

Over the three and half years between the two surveys, over 1300 faculty members have participated in the workshops and new Health Sciences initiatives. In addition, many departments instituted new programs to train and empower faculty to deal with behavioral problems and create mentoring and faculty development programs. Evaluations of workshops were overall positive and enthusiastic (data not shown).

Follow-up Survey In 2015, contents from the two prior climate surveys were combined and re-administered online to all health sciences faculty. This survey was also anonymous, which precluded linking responses by individual participants. Consistent questions were used, allowing comparisons to be made over time. A total of 729 health sciences faculty responded to the 2015 survey, for a response rate of 50 %.

Analyses Differences in survey responses overtime and by respondent gender and rank within each survey were assessed by Mantel-Haenszel chi-square analysis. The online surveys were approved by the UC San Diego Human Research Protections Program.

The UCSD Human Research Protections Program Institutional Review Board reviewed this study including the climate surveys and certified the study as exempt from review.

Results

Climate survey response rates increased from 35 % in 2012 to 50 % in 2015 (see Table 1). In both years, the response rate among women faculty was significantly higher than among men ($p < 0.001$); however, there were no significant differences in response rates by rank. In 2015, the gender difference was particularly pronounced among associate and full professors.

Table 1 Distribution and response rate for health sciences faculty responding to UCSD climate surveys by gender and rank (2012 and 2015)

	2012 climate survey			2015 climate survey		
	Pool	Number	Percent	Pool	Number	Percent
Overall	1350	478	35	1451	729	50
Gender						
Women	509	223	44***	568	305	54***
Men	841	235	29	883	338	38
Rank						
Assistant	402	137	34	404	201	50
Associate	332	93	28	334	139	42
Full	616	224	36	673	285	42
Rank among women						
Assistant	193	70	36	205	103	50
Associate	153	57	37**	151	77	51
Full	163	94	58***	200	112	56
Rank among men						
Assistant	209	67	32	199	96	48
Associate	179	36	20	183	58	32
Full	453	130	29	473	169	36

Overall totals include faculty who did not specify rank and/or gender compared to men, to full professors, or to men of the same rank, respectively

Bold indicates the number of male faculty in the full professor rank-total number who responded in 2012 & 2015 survey, and the percentage who participated

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Overall, faculty reported observing or experiencing behavioral concerns in other faculty members less frequently in 2015 than in 2012, for all of the behaviors queried (see Table 2). For example, almost twice as many faculty reported observing or experiencing derogatory comments or inappropriate jokes three or more times in the past year in 2012 compared to 2015 (29 versus 15 %, $p < 0.001$). Significant declines were also seen for anger outburst, hostile email or verbal communication, and diminished work productivity for that person or others in the unit.

Table 2 Changes in percent of all faculty who reported observing or experiencing behavioral concerns in other faculty member(s) three or more times in the past year (2012 to 2015)

	2012 ($n = 478$)	2015 ($n = 729$)	p value
Derogatory comments or inappropriate jokes	29	15	<0.001
Anger outburst	25	18	<0.01
Hostile email or verbal communication	25	16	<0.001
Intimidating or bullying behavior	24	20	ns
Unwelcome sexual innuendo or behavior	7	5	ns
Diminished work productivity for that person or for others in the unit	27	19	<0.01
Might have jeopardized care	11	9	ns

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ compared to 2012

As can be seen in Table 3, fewer inappropriate behaviors were reported in 2015 than 2012 by both women and men for all behaviors queried, with the exception that women reported intimidating or bullying behavior in the same frequency each year (26 %). Declines for reports of derogatory comments or inappropriate jokes were significant for both women (34 to 18 %, $p < 0.001$) and men (24 to 12 %, $p < 0.001$). While declines in reported hostile email or verbal communication and diminished work productivity were significant only among men. When gender differences are examined within each year (p values not shown), women reported observing or experiencing inappropriate behavior significantly more frequently than men for three of the seven behaviors reported in 2012 and for four behaviors in 2015. For example, women reported intimidating or bullying behavior twice as often as men (26 and 13 % respectively, $p < 0.001$).

Reports of inappropriate behaviors declined for nearly all behaviors among each rank of the faculty (see Table 4), significantly so in seven categories. Reports of derogatory comments and inappropriate jokes declined significantly among all ranks: assistant professors (27 to 12 %, $p < 0.001$), associate professors (38 to 14 %, $p < 0.01$), and full professors (26 to 16 %, $p < 0.01$). When ranks are compared within each year (p values not shown), associates reported more inappropriate behavior for five of the behaviors in 2012, but no significant differences were seen in 2015.

Discussion

The faculty climate survey in 2011 identified an unacceptably high occurrence of faculty who have experienced or observed one or more instances of inappropriate behavior towards gender, race and ethnicity, and sexual orientation. These were especially of concern to women and underrepresented minority status faculty respondents. The 2012 behavior survey described in this paper was prompted by climate survey in 2011 and was specifically designed to probe issues related to faculty interpersonal behavior, which had not been addressed systematically in the past. The results of both surveys prompted an

Table 3 Changes in percent of faculty who reported observing or experiencing behavioral concerns in other faculty member(s) three or more times in the past year by gender (2012 to 2015)

	Women			Men		
	2012 (n = 223)	2015 (n = 305)	p value	2012 (n = 235)	2015 (n = 338)	p value
Derogatory comments or inappropriate jokes	34	19	<0.001	24	12	<0.001
Anger outburst	27	22	ns	19	14	ns
Hostile email or verbal communication	25	19	ns	22	13	<0.01
Intimidating or bullying behavior	26	26	ns	19	13	ns
Unwelcome sexual innuendo or behavior	9	6	ns	6	4	ns
Diminished work productivity for that person or for others in the unit	28	22	ns	25	16	<0.01
Might have jeopardized care	6	8	ns	13	10	ns

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ compared to 2012

action plan that engaged the faculty and leadership to improve the academic environment for faculty.

In response to concerns raised by the surveys, the Office of Faculty Affairs developed a multi-pronged strategy to improve the climate. This included four university-wide presentations and 31 department chair and department meetings. For the eight largest departments (with a faculty population equal to or greater than 30) individual faculty data was presented to the chair and department faculty. A series of eight workshops was developed as well as training for faculty leadership on how to address disruptive faculty members. In addition, many departments instituted new programs to address climate concerns.

While it is not possible to determine how each of these strategies contributed to the systemic changes in behavior we measured, the targeted strategies were aimed at individual faculty knowledge and understanding, departmental specific climate as well as system wide leadership training. Each of these focused activities has been shown to have the potential to impact organizational culture [16]. After each survey, UC San Diego Health Sciences has initiated a response [Action

Plan] and workshops were designed to address specific concerns raised in the surveys. These strategies have been well received, as can be seen by positive and enthusiastic evaluations of the activities. We also believe the higher response rate to the climate survey over time reflects the faculty's trust that their opinions are valued and will lead to institutional change.

Fully understanding the gender difference is limited by the nature of the anonymous survey. Since we could not ask for names of specific misbehaving faculty and it would be very difficult to ask about each individual exhibiting specific behaviors, it is not possible to know how many faculty are responsible for the reported behaviors or their distribution by gender or rank. Women may report experiencing or observing more inappropriate behavior because they are more attuned to recognize such behavior, more likely to report such behavior, or more often the subject of such behavior.

We measured changes in aggregate of overall frequency of faculty perceptions of faculty behavior between two points in time. Despite the apparent reduction in most inappropriate behaviors, it is clear that targeted interventions

Table 4 Changes in percent of faculty who reported observing or experiencing behavioral concerns in other faculty member(s) three or more times in the past year by rank (2012 to 2015)

	Assistant		Associate		Full	
	2012/15 (n = 137/201)	p value	2012/15 (n = 93/139)	p value	2012/15 (n = 224/285)	p value
Derogatory comments or inappropriate jokes	27/12	<0.001	38/14	<0.01	26/16	<0.01
Anger outburst	21/15	ns	33/22	ns	22/22	ns
Hostile email or verbal communication	20/12	<0.05	26/18	ns	25/18	ns
Intimidating or bullying behavior	17/16	ns	30/23	ns	23/20	ns
Unwelcome sexual innuendo or behavior	8/3	<0.05	11/4	ns	6/6	ns
Diminished work productivity for that person or for others in the unit	21/14	ns	34/20	<0.05	26/21	ns
Might have jeopardized care	10/9	ns	19/6	<0.01	7/12	ns

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ compared to 2012

need to occur to reduce these behaviors to acceptable levels, with a particular focus on bullying behavior. The 16 chairs and VC Health Sciences Leadership are committed to improving the climate for all faculty since it clearly sets a tone for the learners in the system—medical and graduate students, house officers, and fellows.

Due to the repeat, cross-sectional nature of the study design using two different time points, there are significant limitations to the interpretation of the findings. The data was analyzed in aggregate, lacking the ability to measure individual respondent changes. This limits the interpretation of the findings in terms of causality, although the observation of aggregate change, with far less faculty experiencing most categories of negative behaviors does indicate a likely change in overall community and incidence of particular faculty behaviors. Since the study's focus relates to the learning and work environments, those possible cultural/environmental trends are relevant yet challenging to measure. There are also limitations in terms of prevalence of observed behaviors in this repeat cross-sectional design. So while speculative, the improvement in behaviors seen over time in the present study could be due to the educational efforts undertaken by the administration in response to the 2011–12 climate surveys, as discussed above. The improvement could also reflect a secular change in behaviors, not specifically linked to UC San Diego's educational efforts. However, we know of no evidence for such improvement nationally or regionally. Alternatively, the improvement could reflect the higher response rate seen in 2015 (50 versus 37 %). If mainly those experiencing or observing inappropriate behavior answered the earlier survey but a wider representation of all faculty responded in the later survey, then the percent observing or experiencing inappropriate behaviors would appear to go down primarily due to their smaller proportion among respondents and would not be due to true changes in behavior. We believe the improvement is most likely due to a combination of behavior changes and response rates.

The experience of one academic medical center's efforts to address institutional culture is shared in this manuscript. The authors participated in a process of change, which engaged all levels of the institution, from the leadership to the various faculty ranks. By initially focusing on the assessment of existing disrespectful behavior patterns, the systematic development of "interventions" to address them was then feasible and more effective. Modalities for intervening included expectation setting, such as Code of Conduct dissemination, and educational sessions, such as presentations and workshops customized for particular leader groups and clinical department, for greater specificity and impact. These efforts resulted in significant reductions of the frequency of harmful, toxic behaviors across all levels of observation and experience—by rank and gender. By reducing toxic behaviors and explicitly promoting a culture of

safety and respect, the learning environment is positively impacted. Future efforts could include the assessment of associated improvements in medical student experiences.

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Compliance with Ethical Standards

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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