

A Professional Development Course Improves Unprofessional Physician Behavior

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Background: In 2008 The Joint Commission issued a *Sentinel Event Alert* that further defined “behaviors that undermine a culture of safety,” stating that “intimidating and disruptive behaviors” can result in medical errors that affect patient care and safety. The American College of Physician Executives found that more than 95% of respondents encountered “disturbing . . . and potentially dangerous” behaviors on a regular basis. The purpose of this study is to evaluate the effectiveness of a professional development program on unprofessional physician behaviors using the B29TM, a reliable and valid tool to assess workplace behaviors.

Methods: A pre-post study design was used to measure changes in physicians’ unprofessional behaviors using the B29, a 35-item, Web-based survey. The survey is completed as a 360° assessment by peers, colleagues, administrators, and staff, and the physician completes a self-assessment. In most cases, the survey is voluntary. Those who completed both a precourse and a postcourse survey made up a convenience sample or subset of the larger number of physicians who completed the course.

Results: Twenty-four of 28 physicians in the study experienced an improvement in professional behavior, demonstrated as a decrease in the number of lowest-rated items. The mean decrease for all 28 physicians was 51.1%. Lowest-rated items improved an average of 53.5% overall. T-scores increased (also improved) for 24 of 28 physicians over the six-month period.

Conclusion: Unprofessional behavior by physicians, as observed and reported by their peers and colleagues, can be positively modified by a relatively brief education program focused on teaching professionalism.

Physicians’ unprofessional behaviors have been considered a serious problem for decades.^{1–3} These behaviors can result in serious consequences in the health care setting, including decreased physician and staff productivity, increased staff turnover, and adverse patient outcomes.^{4–6} The pervasiveness of unprofessional behavior requiring sanctions has been well documented. A 2004 survey by the American College of Physician Executives found that more than 95% of respondents encountered “disturbing . . . and potentially dangerous behaviors on a regular basis.”⁷ In 2004 the American Medical Association (AMA) issued a policy that defined disruptive physician behaviors and provided guidelines for their management. For the next several years, prevention programs and interventions were instituted that sought to mitigate the effects of negative physician behaviors on the health care environment.⁸ Solutions were sought, ranging from calls for a cohesive national effort to deal with a chronic problem⁹ to instituting curriculum at the undergraduate medical education level, as physician behavior problems had been identified at the earliest stages of training.^{10–12}

Despite the focused attention related to the AMA’s 2004 policy, Rosenstein and O’Daniel found that 88% of nurses and 51% of physicians were still reporting and/or

witnessing disruptive behaviors years later.¹³ Such findings resulted in The Joint Commission issuing a *Sentinel Event Alert* in 2008 (“Behaviors That Undermine a Culture of Safety”) stating that “intimidating and disruptive behaviors” can result in medical errors that affect patient care and safety.¹⁴ Specific behaviors listed include “overt actions such as verbal outbursts and physical threats, as well as passive activities such as refusing to perform assigned tasks or quietly exhibiting uncooperative attitudes” during encounters. Other unprofessional behaviors described in the *Sentinel Event Alert* include “reluctance or refusal to answer questions [or] return phone calls or pages; condescending language or voice intonation; and impatience with questions.”¹⁴(p. 1) The Joint Commission also added a new standard (effective January 1, 2009) requiring all accredited organizations to develop a code of conduct to address behavioral issues.^{14,15} And the AMA revised its Code of Medical Ethics to address disruptive behaviors and provided guidelines for health care professionals.¹⁶

In an article that describes how to remediate unprofessional behaviors, Swiggart and colleagues categorized the range of such behaviors as aggressive, passive, and passive-aggressive.¹⁷ Remediation methods have been wide ranging⁸ and include providing education and training to improve communications skills and professional interactions of physicians^{18–20} and medical students.¹² Recommendations have focused on including broader institutional support, developing a peer support/mentoring

network,²¹ or using peer/coworker observations as remediation tools.^{22–24} Additional remediation measures include providing comprehensive lists of resources for use by organizations, academics, or individuals.^{25,26} A growing list of commercial interventional programs addressing disruptive behaviors are available across the country.^{27–29} These courses offer a variety of methodologies that may involve individual sessions spread over several weeks or months. Another approach is to focus on teaching physicians or physicians-in-training about their own behaviors. For example, Bierer et al.³⁰ found that medical students were able to improve skills in professionalism when faculty mentors pointed out specific areas for improvement.

The Vanderbilt Comprehensive Assessment Program for Professionals (VCAP) has used the American Psychiatric Association's guideline to assess fitness-for-duty evaluations as a means of ensuring that physicians return to the workplace prepared to respond appropriately to daily stressors. Findings support pinpointing the source(s) of the disruptive behaviors by evaluating behavioral vs. mental health issues to determine the appropriate remediation.³¹ Organizations have reported improved behaviors through remediation networks, but 20% of physicians who have undergone formal remediation require additional interventions.³¹ Physicians who elect to leave their institution without interventions may not be equipped with the necessary skills to adequately address their unprofessional behaviors.²¹

Noticeably lacking is research evidence that quantifies the effectiveness of the interventions cited in literature. Program evaluations may show that physicians benefit from interventions but do not use measures to assess transfer, such as independent, third-party feedback or the institution's outcomes regarding the effectiveness of changes instituted. Coworker feedback is critical for physicians to evaluate the effectiveness of any behavioral changes. Little is known regarding how or with what success learned interventions are applied or operationalized when the physician returns to the clinical environment.

We developed a course—the “Program for Distressed Physicians” (PDP)—that provides the opportunity for physicians to gain vital skills required to be successful in today's health care environment. The PDP consists of an immersive three-day course followed by three one-day sessions spread over the succeeding six months. The schedule of activities for the immersive portion of the course is presented in [Table 1](#).

OBJECTIVE

The objective of this study was to determine whether physician behaviors were improved as a result of participation in the PDP as measured directly from a 360° feedback tool from peers/colleagues, staff, and administrators.

METHODS

Setting

The PDP goals are to teach specific skills to replace unprofessional behavior with professional behavior, promote peer accountability and support, identify risk factors and prevention strategies, practice new skills, and promote effective leadership skills. Course objectives are met through a combination of interactive didactics, active participation in the small group, self-assessments, introspection, role-playing to practice new skills, and intent to change goal-setting sessions led by faculty steeped in counseling and behavioral psychology. Detailed descriptions of their methods have been published previously.^{17,32,33}

Physicians are usually referred to the course or directed to attend by their health care leaders, administration, or legal representatives. Participants do not repeat the course, though occasionally they return for an extra follow-up session with another class, either voluntarily or directed by a third party. The course fee is either paid out-of-pocket by the physician or covered by his or her institution or practice. Most physicians are granted time off to attend the initial three-day course and three follow-up sessions, but others may have to take leave of absence or, in rare cases, are currently not practicing medicine.

Program Evaluation

PDP course evaluations are generally positive. Participants have been satisfied with course content, curriculum, and faculty and have regularly lauded the personal impact of the course as they return to their work centers determined to change their behaviors. Physicians' intent to change their behaviors, though strong, may not translate into reportable, concrete improved behaviors. Behavioral monitoring is an important component in measuring change.

Study Population and Data Collection

The study population consisted of a convenience sample of all physicians who had participated in the PDP between 2010 and 2017 and had voluntarily completed both pre- and postcourse B29™ Team Behavior Surveys ($N = 28$).³³ The B29 is a valid and reliable 360° assessment tool that measures and monitors a physician's workplace behavior by soliciting ratings and comments from coworkers, peers/colleagues, staff, and administrators over time. Approximately 75% of physicians in the PDP voluntarily complete a baseline (precourse) B29 prior to the initial three-day portion of the PDP. The postsurvey is completed five to six months after the initial course, just prior to the final follow-up session. Approximately 10% of all physicians who attend the PDP distribute the second survey and receive sufficient responses to initiate an analysis of results and generation of a summary report. Though completing the B29 for each participant is voluntary, we advised each physician that completing the pre- and postsurveys and

Table 1. PDP Schedule and Academic Activities (Initial Three-Day Course)

<p>Day 1</p> <p>Introduction/Welcome</p> <p>Session 1A: Group Exercise: Tension in the Physician's World Group discussion of confidentiality and the group process.</p> <p>Session 1B: CALM</p> <p>Session 2: Becoming a Physician A lecture and discussion about the process involved in physician training as well as some common personality traits.</p> <p>Session 3: DVD: "But I just left the OR . . ." Used with permission.</p> <p>Session 4A: Genogram Lecture and demonstration on systems theory and its application to the family; participants will construct a personal genogram.</p> <p>Session 4B: Shame and Guilt A lecture focusing on the powerful effect of shame and how it influences behaviors.</p> <p>Emotional Check-Up/Go Around Discuss 2.0 hours of homework due Day 2.</p>
<p>Day 2</p> <p>Session 5: Group Exercise Emotional Check-Up/Go Around: Costs of anger discussion.</p> <p>Over Lunch</p> <p>Session 6: Review the B29 Report</p> <p>Session 7A: Building Emotional Intelligence, DVD: Ripple Effect video (Used with permission of State Volunteer Mutual Insurance Company.) Review of section articles.</p> <p>Session 7B: Role-Play Exercise</p> <p>Session 8: Intend to Change and Flooding Exercises (Homework assignment)</p> <p>Emotional Check-Up/Go Around Discuss 2.5 hours of homework due Day 3.</p>
<p>Day 3</p> <p>Session 9: Group Exercise Emotional Check-Up/Go Around/CALM</p> <p>Session 10: Role-Play Exercise (continued from Day 2)</p> <p>Session 11A: Assertiveness II and IIB Relapse Prevention</p> <p>Session 12: Smooth Sailing</p> <p>Session 13A: Intend to Change Written Exercise Experiential exercise in which the participants review three behaviors they wish to change because of the course.</p> <p>Session 13B: Emotional Check-Up/Go Around: Final Feedback Complete course evaluation. Homework assignment for first follow-up session one month later. Adjourn.</p>

receiving feedback via the individualized report was an important component of successfully meeting course objectives. Participants in all Center for Professional Health (CPH) courses complete a separate demographic survey.

The B29 Team Behavioral Survey

The B29 is structured using the core competencies from the American Board of Medical Specialties and the Accreditation Council for Graduate Medical Education. The B-29 assesses three core competencies essential for the practice of medicine: interpersonal and communication skills, professionalism, and system-based practice. The data contained in the individual's report provide valuable feedback on performance and areas that need improvement or meet desired behavioral standards on post-assessments. Along with colleagues and other staff in the practice setting, the physician completes a self-evaluation that allows him or her to compare self-ratings with the anonymous feedback received in the workplace.

The B29 Team Behavioral Survey consists of 35 items. Examples of specific items include asking respondents to rate "the physician's understanding of how his/her behavior affects others" (teamwork), "skill at dealing with peers"

(peer relations), how his or her behavior "makes others comfortable in their work" (interprofessional relations), and "level of concern and empathy for the patient's family" (patient and family orientation and empathy). Each item is rated by respondents as "among the best," "top half," "average," "bottom half," or "among the worst." Individual items are scored and grouped into similarly themed factors via an algorithm developed in-house and powered by FileMaker Pro (Claris International Inc., Santa Clara, California). For example, the factor that pertains to general personal demeanor includes several survey items relating to teamwork, peer relations, process engagement, and interprofessional relations. Other factors include items that rate the physician's willingness or ability to meet hospital and clinical obligations and tasks in a timely fashion, items that assess the physician's ability to avoid egregious behaviors, items rating the physician's patient and family orientation and empathy, and items associated with rating a physician's demonstrating passive-aggressive behaviors.

The B29 survey was validated using a matched, case-control study methodology to test its ability to reliably distinguish between physicians referred to the PDP. The

validity study included physicians of similar backgrounds and specialties who had not been referred to the PDP (control physicians).³³ Results were used to create a normalized T-score that serves as the baseline with which to compare PDP attendees to the normalized average score of the validity study's control population. A T-score is a standardized test statistic useful for comparing scores derived from a sample population, as was the case during the B29 validation study.³³ T-scores are possible because the responses are scaled to allow converting from text to continuous variables ("among the best" converted to 5; "among the worst" converted to 1). Each physician receives a T-score per item and factor.

When respondents complete the survey, items for which they do not have sufficient firsthand knowledge do not require an answer (for example, administrators may not be as familiar with the physician's clinical behaviors). The program computes the responses received with a required minimum threshold of 10 responses for generating a report. The validity study resulted in establishing a T-score mean of 50 with a standard deviation of 10, range 0 to 60. More than 75% of physicians attending the PDP had T-scores ranging from 40 to 60.

Physicians are also provided each item's risk score, which is the percentage of scores in the two lowest ratings ("bottom half" and "among the worst"). Physicians may have a relatively high T-score but receive a number of risk score ratings. An example is a physician who is rated very highly by colleagues/peers but receives two lowest ratings from staff or administrators. A T-score higher than 50 with 0 risk scores is exceptionally good. A T-score between 40 and 50 with 0 risk scores is an expected level. A T-score lower than 40 indicates concern is warranted.

To determine PDP impact per physician, we summed only the two lowest-rated items (the risk scores) for each to compare the percentage of increase/decrease pre- and postcourse (Table 2). We then summed the number of lowest-rated responses per factor to determine the percentage of increase/decrease from precourse to postcourse (Table 3). Finally, we looked at the change in factor T-scores from precourse to postcourse (Table 4).

Administration of the B29

The B29 is administered to each physician via REDCap (Research Electronic Data Capture), a secure, Web-based application developed for electronic collection and management of research and clinical trial data (REDCap 9.3.6, ©2019 Vanderbilt University). REDCap data are encrypted and specifically developed around HIPAA Security Rule guidelines. Physicians are sent an e-mail, usually three to six months prior to the course, containing the secure electronic link and guidelines for addressees, including a sample e-mail they may use. Given the variability in practice settings, physicians send the e-mail to as many respondents

Table 2. Change in Number of Two Lowest Ratings per Physician Precourse to Postcourse*

Physician	Precourse N Two Lowest-Rated Items	Postcourse N Two Lowest-Rated Items	% Change
1	27	0	-100.0
2	30	5	-83.3
3	1	0	-100.0
4	78	3	-96.2
5	121	19	-84.3
6	4	0	-100.0
7	135	30	-77.8
8	112	32	-71.4
9	11	3	-72.8
10	100	136	+36.0
11	55	76	+38.2
12	33	79	+139.4
13	120	22	-81.7
14	18	0	-100.0
15	84	53	-36.9
16	98	13	-86.7
17	182	93	-48.9
18	32	76	+137.5
19	79	37	-53.2
20	73	43	-41.1
21	46	0	-100.0
22	55	6	-89.1
23	68	7	-89.7
24	293	38	-87.0
25	163	96	-41.1
26	15	0	-100.0
27	72	33	-54.2
28	42	0	-100.0

* Average number of raters per physician: precourse, 16.6; postcourse, 12.0.

Table 3. Change in Number of Two Lowest Ratings per Factor Precourse to Postcourse*

Factor	Precourse N Two Lowest-Rated Items	Postcourse N Two Lowest-Rated Items	% Change
Teamwork	500	207	-58.6
Peer Relations	274	122	-55.5
Process Engagement	327	120	-63.3
Interprofessional Relations	561	202	-64.0
Willingness/Ability to Meet Hospital/Clinical Obligations and Tasks	144	56	-61.1
Avoiding Egregious Behaviors	93	41	-55.9
Patient/Family Orientation and Empathy	53	49	-7.5
Passive-Aggressive Behaviors	367	140	-61.9

* Average number of low-rated items per factor: precourse, 289.9; postcourse, 117.1.

Table 4. Change in Factor T-Score Precourse to Post-course*

Factors/Subfactors	Precourse	Postcourse	Change
	T-Score Mean	T-Score Mean	
General Professional Demeanor	45.7	49.6	+3.9
• Teamwork	46.0	49.9	+3.9
• Peer Relations	46.2	49.7	+3.5
• Process Engagement	46.2	49.7	+3.5
• Interprofessional Relations	45.0	49.1	+4.1
Willingness/Ability to Meet Hospital/Clinical Obligations and Tasks	48.7	50.7	+2.0
Avoiding Egregious Behaviors	46.2	48.5	+2.3
• Patient/Family Orientation and Empathy	46.4	48.6	+2.2
• Passive-Aggressive Behaviors	46.9	49.7	+2.8

* Average rating all factors: precourse 46.3; postcourse 49.5.

Table 5. Demographics of Study Population

	N (%)
Gender	
Female	5 (17.9)
Male	23 (82.1)
Mean Age	48
Race*	
White	23 (82.1)
Black or African American	2 (7.1)
Asian	2 (7.1)
American Indian or Alaska Native	0
Native Hawaiian or Other Pacific Islander	0
Not available	1 (3.6)
Medical Specialties	
Surgery/Anesthesiology	16 (57.1)
Internal/Family Medicine (IM/FM)	2 (7.1)
Other IM/FM specialty	8 (28.6)
Other medical specialty	2 (7.1)

* Categories from US Census Bureau. Race: About. (Updated: Jan 23, 2018.) Accessed Nov 20, 2019. <https://www.census.gov/topics/population/race/about.html>.

as they wish to reach the threshold for generating a report. Guidelines suggest that B29s be completed by those most familiar with their practice. The completed report is seen only by the physician, CPH leadership, and the CPH staff member under whose purview administration of the B29 program falls. On occasion, the physician may choose to share the report with others in the organization at his or her discretion. Approximately one month prior to course completion and just short of six months after the initial program, physicians receive the same link to complete the postcourse B29 assessment. Physicians may send the postcourse survey to the same or different respondents depending on several factors, but often due to changes in the practice setting that may occur in the interval from the pre- to postcourse surveys. Because each survey response is anonymous, neither the physician nor the CPH staff knows who responds.

The program software generally requires a minimum of 10 responses to generate a report, not including the self-evaluation. We typically find that each physician averages 15 to 20 responses per survey, though this number has been as high as 90. In cases where the threshold is not met, we ask that physicians resend the link or expand the population being contacted. If it is still not met, a report is generated and evaluated to determine if results are valid.

In addition to T-scores, we seek free-text comments from respondents. All comments are aggregated and anonymized. We provide all comments in reports verbatim except in cases where comments are deemed inappropriate or extreme or may reveal the rater’s identity; for example, “I am Dr. Doe’s Medical Director . . .” or “As Dr. Doe’s Night Shift Nurse Manager . . .”

RESULTS

The study population was composed of all physicians who completed both precourse and postcourse B29 surveys and received sufficient responses to render a report (N=28). Results of the demographic survey show that the study population (Table 5) contained disproportionately more male physicians (82.1%) than female physicians (17.9%). The mean age of study physicians was 48 years. A greater percentage of physicians were white (82.1%), and significantly fewer were black/African-American or Asian (7.1%, respectively). Regarding the specialties of the study group, surgeon specialties and anesthesiologists (57.1%) attending the course are overrepresented proportional to their representation in the national physician population.

Tables 2, 3, and 4 focus on the study aims seeking to determine if physician behaviors improved as a result of participation in the PDP as measured directly from B29 feedback from peers/colleagues, staff, and administrators. There were 802 individual survey responses for the 28 physicians: 465 precourse and 337 postcourse.

In Table 2 we display the results of our investigation into whether the number of each physician’s two lowest ratings (risk scores) decreased from phase 1 to phase 2 after his or her participation in the PDP. In this study, the mean number of responses per physician was 16.6 for the precourse survey and 12.0 for the postcourse survey. Of the 28 physicians, 24 experienced a decrease in the number of two lowest ratings received, with an average decrease of 79.0%. Four physicians increased their risk score ratings by an average of 87.8% from precourse to postcourse surveys. For all 28 physicians, the mean decrease in the number of two lowest ratings received was 55.1%.

Administrators most frequently submitted lowest scores on phase 1 (an average of 6.7 low ratings per

administrators' survey), peers/colleagues averaged 4.8 low ratings per survey, and staff members averaged 3.3 low responses. The physicians in the course rated themselves in the two lowest categories an average of 3.7 times per self-evaluation. However, postcourse evaluations submitted by administrators resulted in the largest reduction in risk scores ratings, signifying improved behaviors, decreasing from 6.7 items per survey to 2.2 items (67.2%), while peers/colleagues averaged 3.8 low ratings per survey on postcourse surveys, decreasing 10.2% from precourse. Staff averaged 2.3 low ratings per evaluation on postcourse B29s, a decrease of 35.3%.

As mentioned above, individual survey items are scored and similarly themed items are grouped into factors. We investigated the change in the number of lowest ratings for items associated with the factors Teamwork, Peer Relations, and so on (Table 3). For example, precourse items aggregated into the factor Teamwork received 500 low ratings, and the factor Peer Relations received 274. However, in postcourse surveys Teamwork received 207 low ratings (a decrease of 58.6%), and Peer Relations received 122 (a decrease of 55.5%). Overall, the factors decreased an average of 53.5% from pre- to postcourse. The only factor that did not decrease significantly was Patient and Family Orientation and Empathy (7.5% decrease). However, this was also the factor that received the lowest number of precourse low ratings.

High T-scores indicate more positive ratings on behavior factors, and we found that factor T-scores improved (increased) from precourse to postcourse (Table 4). Results show that every factor/subfactor T-score increased, with Interprofessional Relations increasing the most at 4.1 (9.1%). Several other factors increased at a similar rate. Overall, factor T-scores increased an average of 3.1 (6.7)%.

We found that factor changes when split by physician gender were not significant: men increased in average T-score from 48.5 to 49.5, and women increased from 46.5 to 48.6. Looking at T-score improvement by specialty, the Internal Medicine specialists increased 11.1% (39.7 to 44.1), and the category Other Medical Specialty increased 10.5% (51.4 to 56.8).

DISCUSSION

Reliance on Course Evaluations

Many behavior modification courses rely on postintervention evaluations submitted by physician participants who have received interventional training *ipso facto* to determine its effectiveness. The participant's level of satisfaction with training, which in our course is typically very high, does not necessarily indicate changes in personal behaviors nor translate into improved interactions after the participant's return to his or her practice setting. PDP participant evaluations indicate that attendees are satisfied with course content, curriculum, and instructional meth-

ods. Participants regularly noted how the course affected them personally and motivated them to return to work determined to change their behaviors and mend fences within their practice setting with colleagues and staff.

Physician interactions with coworkers (colleagues, staff, and administrators) are more likely the impetus for referral to the PDP than interactions with patients and families. The majority of physicians in the study possess excellent clinical skills, and their clinical behaviors stem from a desire to provide the highest quality of care to their patients. However, many—if not all—of the physicians had stated that training in emotional intelligence, including conflict resolution skills, was not a part of their medical or residency training.

Four physicians experienced negligible improvement or worse ratings from pre- to postcourse surveys. Participants generally survey the same group of raters, although it is not a requirement. At times, physicians working in a toxic environment may return to the practice setting following the course. Even if the physicians' behaviors have changed for the positive, the responders may retain a bias hangover and complete the B29 according to their previous interactions and not more recent experiences, an unfortunate situation for the physician but a likelihood that is difficult to forecast. We have also found that, at times, only one or two responders were responsible for a disproportionate number of low ratings or negative comments. Reviews of B29 surveys reveal that many physicians receive very positive comments and ratings on postsurveys; however, any negative responses are cause for concern.

We found that surveys completed by administrators resulted in the most dramatic decreases in the number of low ratings from pre- to postcourse. We surmise that ratings from administrators, who often are involved in the initial decision to refer someone to the PDP even though daily contact may be less than peers/staff, may be influenced by a reduction or absence in the number of recent complaints. Health care practitioners who spend more time one-on-one with physicians in the clinic would have greater insight into the physicians' behaviors day to day. Thus, their ratings may be more consistent.

Limitations

Although we have demonstrated significant findings that support our hypothesis of positive behavior change in distressed physicians, our study is not without limitations. First, all data are based on subjective ratings and reports, not on our direct observations of behavioral changes in the practice setting. Evaluations of coworkers' behaviors can be influenced not only by the actual behaviors, but also by the evaluators' temperament, current mood or physiological status, social expectations, and interpersonal history with the person being evaluated.

Second, some participants worked in very large hospital systems, where they could obtain ratings from an entirely

different group of respondents pre- to postcourse. Others working in smaller systems with a smaller provider population would be more likely to resurvey the same individuals for both surveys. It is difficult to surmise how replicating the survey population for both surveys may affect results, as all surveys are anonymous (neither the CPH staff nor the physician knows who is completing a survey). Keeping the same evaluators may allow direct comparison between present vs. previous behaviors, but existing biases may also affect the postcourse ratings even if behavioral changes had been made. Having the postcourse B29 completed by a new group of recipients may ensure that no holdover bias exists, but that may also limit the applicability or relevance of the evaluators' feedback. This is particularly true if the evaluators are more removed from the physician's sphere of practice or if responses reflect fewer interactions with the physician.

Additional Studies and Future Directions

Additional studies evaluating the impact of continuing medical education courses for distressed or burned-out physicians are urgently needed to refine and improve health care delivery. Medicine can be incredibly stressful and frustrating, as evidenced by the exceedingly high rates of burnout and tragic loss of physicians to suicide. The volume of knowledge that must be mastered in undergraduate medical education, residency, and subspecialty training to become a highly proficient and skilled physician leaves little time and opportunity for training in emotional intelligence, conflict resolution, and self-care. Without these essential skills, many physicians are ill-equipped to be effective in health care settings and subsequently manifest distressed, disruptive behaviors.

Future work in this area needs to focus on real-life application of these vital skills in the clinical setting in combination with obtaining feedback from colleagues and coworkers. These evaluations by coworkers, combined with innovative strategies such as role-play and direct feedback, can train the physician to adopt specific new skills. Helping physicians cope with distress and achieve more constructive and effective interactions is key to positively influencing the physician, coworkers, and patients. It is imperative that we evaluate the outcomes of the interventions and employ best practices in the remediation of our colleagues. This study is one step in that direction.

CONCLUSION

Physician unprofessional behaviors significantly improved between the time of their enrollment in the PDP to the six-month postintervention assessments. This finding supports the proposition that systematic education of physicians in emotional intelligence, self-awareness, introspection, interpersonal skills, conflict resolution, lead-

ership, self-care, emotional regulation, and mindfulness can lead to behavior change in the clinical environment. This study provides tangible evidence that the training provided by the center's distressed physicians course is effective in helping a group of physicians to modify their behaviors. By doing so, we enable physicians to return to their practice armed with new skills and better prepared to provide excellent patient care and leadership within their institution.

Conflicts of Interest. All authors report no conflicts of interest.

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REFERENCES

1. Donaldson LJ. Doctors with problems in an NHS workforce. *BMJ*. 1994 May 14;308:1277–1282.
2. Summer GL, Ford CV, Lightfoot WM. The disruptive physician. I: the Alabama Physicians Recovery Network. *Fed Bull*. 1997;84:236–243.
3. Ford CV, Summer GL. The disruptive physician, II: the role of personality disorders. *Fed Bull*. 1998;85:20–29.
4. Rawson JV, et al. The cost of disruptive and unprofessional behaviors in health care. *Acad Radiol*. 2013;20:1074–1076.
5. Villafraña A, et al. Disruptive behaviour in the perioperative setting: a contemporary review. *Can J Anaesth*. 2017;64:128–140.
6. Panagioti M, et al. Association between physician burnout and patient safety, professionalism, and patient satisfaction: a systematic review and meta-analysis. *JAMA Intern Med*. 2018 Oct 1;178:1317–1330.
7. Weber DP. Poll results: doctor's disruptive behavior disturbs physician leaders. *Physician Exec*. 2004;30(5):6–14.
8. Harmon L, Pomm RM. Evaluation, treatment, and monitoring of disruptive physician behavior. *Psychiatr Ann*. 2004;34:770–774.
9. Leape LL, Fromson JA. Problem doctors: is there a system-level solution? *Ann Intern Med*. 2006 Jan 17;144:107–115.
10. Hickson GB, et al. A complementary approach to promoting professionalism: identifying, measuring, and addressing unprofessional behaviors. *Acad Med*. 2007;82:1040–1048.
11. Samenow CP, et al. Consequences of physician disruptive behavior. *Tenn Med*. 2007;100:38–40.
12. Papadakis MA, Loeser H, Healy K. Early detection and evaluation of professionalism deficiencies in medical students: one school's approach. *Acad Med*. 2001;76:1100–1106.

13. Rosenstein AH, O'Daniel M. A survey of the impact of disruptive behaviors and communication defects on patient safety. *Jt Comm J Qual Patient Saf.* 2008;34:464–471.
14. The Joint Commission Behaviors that undermine a culture of safety. Sentinel Event Alert. July 9, 2008(47). Accessed Nov 20, 2019 https://www.jointcommission.org/assets/1/18/SEA_40.PDF.
15. Fox Rothschild LLP JCAHO Requires “Zero Tolerance” for Disruptive Doctors and Administrators. Maruca WH. Jan 2009. Accessed Nov 20, 2019 <https://www.foxrothschild.com/publications/jcaho-equires-%E2%80%9Czero-tolerance%E2%80%9D-for-disruptive-doctors-and-administrators/>.
16. American Medical Association. Physicians with Disruptive Behavior: Code of Medical Ethics Opinion 9.4.4. Accessed Nov 20, 2019. <https://www.ama-assn.org/delivering-care/ethics/physicians-disruptive-behavior>.
17. Swiggart WH, et al. A plan for identification, treatment, and remediation of disruptive behaviors in physicians. *Front Health Serv Manage.* 2009;25(4):3–11.
18. Adams KE, Emmons S, Romm J. How resident unprofessional behavior is identified and managed: a program director survey. *Am J Obstet Gynecol.* 2008;198 692.e1–692.e4.
19. Kaye A, Cook T. Improving radiologist-IT staff communications and collaboration through a shadowing project. *J Digit Imaging.* 2015;28:433–438.
20. Penberthy JK, et al. Impact of coping and communication skills program on physician burnout, quality of life, and emotional flooding. *Saf Health Work.* 2018;9:381–387.
21. Halverson AL, Neumayer L, Dagi TF. Leadership skills in the OR, part II: recognizing disruptive behavior. *Bull Am Coll Surg.* 2012;97(6):17–23. Accessed Nov 20, 2019 <http://bulletin.facs.org/2012/06/leadership-skills-in-the-or-part-ii-recognizing-disruptive-behavior/>.
22. Pichert JW, et al. An intervention model that promotes accountability: peer messengers and patient/family complaints. *Jt Comm J Qual Patient Saf.* 2013;39:435–436.
23. Nurudeen SM, et al. Can 360-degree reviews help surgeons? Evaluation of multisource feedback for surgeons in a multi-institutional quality improvement project. *J Am Coll Surg.* 2015;221:837–844.
24. Webb LE, et al. Using coworker observations to promote accountability for disrespectful and unsafe behaviors by physicians and advanced practice professionals. *Jt Comm J Qual Patient Saf.* 2016;42:149–164.
25. American College of Emergency Physicians. Physician Remediation, Retraining & Behavior Modification Resources. Accessed November 20, 2019. <https://www.acep.org/administration/personnel-team-management/physician-remediation-retraining-behavior-modification-resources/#sm.00089w87paokcw7118x1sdrkbdqsg>.
26. Federation of State Medical Boards. Directory of Physician Assessment and Remedial Education Programs. (Updated: Oct 28, 2019.). Accessed Nov 20, 2019. <https://www.fsmb.org/siteassets/spex/pdfs/remedprog.pdf>.
27. Javelin Learning Solutions. Physician Remediation. 2018. Accessed Nov 20, 2019. <http://www.javelinlearningsolutions.com/physician-remediation/>.
28. AJ Novick Group. Physician Anger Management and Coaching for Disruptive Behavior. Accessed Nov 20, 2019. <http://www.ajnovickgroup.com/anger-management/disruptive-physicians.aspx>.
29. Longo J. Combating disruptive behaviors: strategies to promote a healthy work environment. *Online J Issues Nurs.* 2010 Jan 31;15(1):5. Accessed Nov 20, 2019 <http://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol152010/No1Jan2010/Combating-Disruptive-Behaviors.html>.
30. Bierer SB, Dannefer EF, Tetzlaff JE. Time to loosen the apron strings: cohort-based evaluation of a learner-driven remediation model at one medical School. *J Gen Intern Med.* 2015;30:1339–1343.
31. Finlayson AJR, et al. Restoring professionalism: the physician fitness-for-duty evaluation. *Gen Hosp Psychiatry.* 2013;35:659–663.
32. Samenow CP, et al. Transformative learning in a professional development course aimed at addressing disruptive physician behavior: a composite case study. *Acad Med.* 2013;88:117–123.
33. Swiggart WH, et al. Assessment of a physician’s workplace behavior. *Physician Leadersh J.* 2014;1(2):28–33.