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Complex Factors Associated with Disruptive Medical Professional Behavior

Retrospective Analysis of the Colorado Physician Health Program Data

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Background: Disruptive behavior in medical settings, which includes bullying, intimidating, and other behaviors, is associated with medical errors, low patient and team satisfaction, high job turnover, and understaffing throughout the healthcare system. State-level Physician and Professional Health Programs (PHPs) provide valuable coordination of evaluation, treatment, and monitoring for disruptive behavior in medical settings. The aim of this study was to describe characteristics of 308 physicians, physician assistants, anesthesiology assistants, and trainees in these fields referred to the Colorado Physician Health Program (CPHP) for disruptive behavior between 2015 and 2022.

Methods: Using agency records and case reviews, the authors describe participant characteristics, diagnoses, recommendations for treatment and third-party evaluations, bivariate relationships, and outcomes.

Results: Nearly three quarters of participants were male and had mandatory referrals. With a comprehensive evaluation conducted by a psychiatrist, 33.1% received a psychiatric diagnosis and 26.3% were identified as having symptoms of a personality disorder. Situational stress was identified in 54.9%, with workplace stress being most common and more frequent in females (46.2%) than males (34.1%) ($p < 0.05$). The most recommended treatment was coaching (49.7%), followed by therapy (29.9%), psychiatric treatment (17.2%), and education (14.3%). Nearly all (95.1%) successfully completed participation, with 57.8% completing within one year. Those with psychiatric diagnoses took longer to complete participation (median 390 vs. 279 days; $p < 0.001$).

Conclusion: Thorough assessment of disruptive behavior can uncover multiple underlying conditions in providers and the systems in which they work. Agencies tasked with addressing this behavior should identify underlying conditions and consider them when developing personalized treatment plans that may address more than disruptive behavior.

Disruptive behavior is conduct that impairs team functioning and/or clinical outcomes, including behaviors such as bullying, intimidation, or unprofessional communication.[1,2] In 2008 Joint Commission stated that "intimidating and disruptive behaviors can foster medical errors, contribute to poor patient satisfaction and to preventable adverse outcomes, increase the cost of care, and cause qualified clinicians, administrators and managers to seek new positions in more professional environments,"[3, p. 1] creating the impetus for healthcare organizations to create policies to address disruptive behavior.[4] Disruptive behavior can discourage team members from seeking clarification, voicing concerns, or asking necessary questions about orders, thereby increasing the risk of medical mistakes and potential legal consequences.[2,5–7] At a system level, disruptive behavior can lead to high job turnover, leaving the profession, and understaffing throughout the healthcare system.[8] Although studies disagree on how many clinicians display disruptive behavior, studies agree that nearly 100% of clinicians and other healthcare team members witness disruptive behavior at least once a month.[1,9–12]

Factors associated with disruptive behavior include worksite conditions such as the stress of the clinical situation,[13,14] unclear hospital policies, urgent competing responsibilities,[13] interpersonal conflict, lack of control over working conditions, one's level of power in the organization, inadequate resources, and overwork.[9,15] Individual factors include poor communication skills;[16] personality traits; psychological problems such as burnout, depression, and anxiety; substance use; cognitive impairment;[6,17] and physical health.[18] Older physicians may be more likely to exhibit disruptive behavior due to lack of comfort with delivering medical care through teams.[9,19] Pressures outside the workplace such as marital relationships, health issues, a death in the family, and financial stress may also be contributing factors.[9]

Physician and Professional Health Programs (PHPs) are state-level agencies that provide confidential assessment, referral, and monitoring for health professionals with conditions that may impair their ability to practice safely, including psychiatric, substance use, medical, and behavioral concerns.[20] Established through state or province

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legislation and supported by organized medicine, PHPs operate with protections that allow for confidential services and, in many cases, diversion from formal disciplinary processes. Compared to programs embedded within healthcare systems, PHPs have broader reach and confidentiality protections, positioning them uniquely to describe the characteristics, care, and outcomes of healthcare providers who exhibit disruptive behavior.

The Colorado PHP (CPHP), established in 1986, addresses the health of physicians (MD, DO), physician assistants (PAs), anesthesiology assistants (AAs), and trainees in these fields. Of 1,488 individuals who participated in CPHP between September 2015 and December 2022, 308 (20.7%) had a primary presenting problem of disruptive behavior. Since 2015, CPHP has systematically recorded diagnoses given to these participants.

There have been few published reports of healthcare providers who present to a healthcare program to address disruptive behavior.[21,22] The goal of this report is to describe healthcare providers who were referred to CPHP for disruptive behavior. We report demographic characteristics, diagnoses, treatment recommendations, situational stressors, and participation outcomes. The results can guide PHPs and others who assess and develop treatment plans for disruptive behavior, with the goal of achieving clinical and behavioral stability and maximizing providers' ability to provide high-quality medical care.

METHODS

Setting and Participants

This analysis includes all ($N = 308$) healthcare providers (MD, DO, PA, AA, and respective trainees) who were referred to CPHP for disruptive behavior and completed their participation between September 2015 and December 2022.

Healthcare providers are referred statewide to CPHP by a variety of sources, including worksites, schools, colleagues, family members, legal representatives, and, frequently, themselves. Referrals can be voluntary or mandatory. Voluntary referrals can range from a completely proactive effort on the part of the participant to a situation in which the participant is considered voluntary, but they were highly encouraged to self-refer by an authority such as their employer. Mandatory referrals are generally tied to tangible consequences such as loss of employment if they fail to comply.

Program Description

All participants at CPHP undergo a 1.5 hour intake evaluation with a medical director, who is a psychiatrist, and a master's-level clinician, usually a licensed clinical social worker or licensed professional counselor. This includes a full psychiatric evaluation and completion of standardized instruments, including the Well-Being Index[23] and the PHQ-9 (SF-36 version).[24] The assigned medical director meets regularly with the participant, makes specific care recommendations, writes reports, and oversees drug testing when necessary. Clinicians serve as the primary point of contact, providing case management, facilitating communication of treatment recommendations, and coordinating collateral information from workplaces and treatment providers. Psychiatric diagnoses are assigned by medical directors based on the *Diagnostic and Statistical Manual of Disorders*, 5th edition (DSM-5).[25] Participants are recommended for third-party evaluations when their needs exceed CPHP's evaluation capacity. These external evaluations are typically conducted over several days by specialists, often at an inpatient setting.

Generally, if a participant has a one-time behavioral incident, their treatment recommendation may be solely educational, which could be discussions with the CPHP medical director and/or a psychoeducational course, such as one to build communication skills. Education is generally recommended for the least severe cases, and coaching is the next level of recommendation. If behavior is an ongoing issue, the participant would likely receive a recommendation for a residential assessment and longitudinal treatment with an assessment facility, which could include ongoing updates and feedback with the workplace, coaching, or other treatment. Other treatment recommendations depend on what is uncovered in ongoing assessments and on the participant's needs. Descriptions of treatment and third-party evaluation categories are presented in Table 1. Up to three treatments and three third-party evaluations were recorded for each participant.

In addition, participants may be monitored for adherence to treatment via individual meetings between CPHP staff and the participant, as well as communication between CPHP staff and treatment providers. Monitoring may also include collection and testing of biological specimens for those with substance use disorders, and gathering of collateral information about behavior from workplaces, family members, and others. Successful completion is defined by clinical stability and the absence of recurrent disruptive behavior, supported by collateral reports when applicable, from treatment providers and the workplace.

Most participants referred for disruptive behavior have no restrictions placed on their licenses and can legally practice during their involvement with CPHP. License suspension is more likely when disruptive behavior is present in combination with an illness (for example, substance use disorder), or in combination with another behavior (for example, professional boundary violations) or a consequence (for example, patient harm). Despite the active status of a license, in some cases workplaces may suspend practicing privileges or terminate employment due to disruptive behavior.

Table 1. Treatments and Evaluations for Healthcare Providers Exhibiting Disruptive Behavior in a Medical Setting

Recommendation	Definition/Description
CPHP Evaluation Only	
None	No recommendations for third-party evaluations or treatments
Treatment	
Coaching	Behavioral and/or psychological strategies taught by a trained professional
Therapy	Therapy with a licensed clinical social worker, licensed professional counselor, psychologist, or psychiatrist (without medication management)
Psychiatrist	Medication management with a psychiatric provider
Education	Class/course such as ethics, communication, boundaries, disruptive behavior, prescribing issues, or referral to a therapist for a psychoeducation-specific issue
Health-related	Primary care physician or specialty care (for example, multiple sclerosis, Parkinson's, cancer, sleep disorder)
Substance-related	Substance-related intervention at varying levels: intensive outpatient program, inpatient/residential program, and/or outpatient therapy focused on substances
Third-Party Evaluations	
Behavioral IP	Behavioral evaluation inpatient or in a residential facility
Behavioral OP	Behavioral evaluation outpatient (individual provider conducting a one-time evaluation)
Psychiatric IP	Psychiatric evaluation inpatient or in a residential facility
Psychiatric OP	Psychiatric evaluation outpatient
Specialized Assessments	
Neuropsychological testing	Testing, such as for cognition
Specialist medical consultation	Consultation, such as for neurological or sleep study; evaluation for autism spectrum disorder or attention deficit/hyperactive disorder
Psychological testing	Testing, such as personality measures

Data Sources

The primary presenting problem, diagnoses, treatment and evaluation recommendations, and detailed notes reflecting the observations of the medical director and clinician, are recorded for all interactions with the participant and for all collateral information in an electronic database. This includes details about the clinical presentation of the participant, mental status evaluations, history, and current stressors.

For this analysis, medical directors reviewed the detailed psychiatric case notes for each participant and responded to the question, "Did this person experience situational stress/stressors that contributed to their disruptive behavior (i.e., work stress, family stress, medical issues, relationship issues, etc.)?" Medical directors recorded the stressors and rated each as a minor (1), moderate (2), or major (3) contributor to disruptive behavior. Medical directors excluded stressors that were due to the CPHP referral process itself and/or related to the receipt of psychological/behavioral diagnoses.[26] We created a stress score by summing levels across stressors and capping the score at 3. Participants could reach the highest score with one stressor rated 3 or by a combination of two or more stressors.

Personality disorders are not routinely recorded in CPHP records due to the complexity of assessment, which is often beyond the scope of the CPHP evaluation, and because of the potential for associated stigma. However, when personality challenges are relevant to a case, notes are recorded and interventions are recommended.[27] For this analysis, CPHP medical directors retrospectively reviewed case notes and answered the question, "Did this person have significant personality challenges that contributed to their disruptive behavior?"

Gender and race/ethnicity were self-reported and captured in a standardized intake questionnaire. For the present analysis, whenever standardized information was missing from the electronic record, a review of detailed notes was completed to capture the information.

Data Analysis

We report descriptive statistics for each variable as appropriate. Chi-square (for comparisons of proportions) and nonparametric tests (for comparison of medians) were used; p values of less than 0.05 were considered statistically significant. Analyses were completed using IBM SPSS Statistics 29 (IBM Corp., Armonk, New York). For comparison, we compiled basic descriptive characteristics (sex, referral source, type of referral, and specialty) for the full population referred to CPHP over the same time period. This project was reviewed and approved by the Colorado Multiple Institutional Review Board.

RESULTS

Participant Characteristics

Table 2 describes all 308 CPHP participants who were referred for and completed participation for disruptive behavior between 2015 and 2022. Most were physicians (69.5%) or residents (16.9%). The most common practice setting was a hospital (41.6%). The majority were male (70.5%)

Table 2. Characteristics of Colorado Physician Health Program Participants Who Were Referred and Completed Participation for Disruptive Behavior, 2015–2022 (*N* = 308)

Characteristic	*n* (%)
Professional Position	
Doctor of Osteopathy (DO)	17 (5.5)
Doctor of Medicine (MD)	197 (64.0)
Physician Assistant (PA)	7 (2.3)
Anesthesiology Assistant (AA)	2 (0.6)
Resident, DO	10 (3.2)
Resident, MD	42 (13.6)
Student, DO or MD	15 (4.9)
Student, PA	11 (3.6)
Student, AA	7 (2.3)
Specialty	
Anesthesiology	30 (10.9)
Emergency Medicine	17 (6.2)
Surgery*	42 (15.3)
Family Medicine	40 (14.5)
Internal Medicine	62 (22.5)
Obstetrics & Gynecology	13 (4.7)
Pediatrics	8 (2.9)
Neurology	7 (2.5)
Radiology	10 (3.6)
Orthopedic/Sports Medicine Surgery	25 (9.1)
Other	21 (7.6)
None (includes all students; not included in denominator)	33 (n/a)
Practice Setting	
Academic	64 (20.8)
Hospital	128 (41.6)
Outpatient clinic	67 (21.8)
Private practice	17 (5.5)
Student	25 (8.1)
Not currently practicing	7 (2.3)
Gender	
Female	91 (29.5)
Male	217 (70.5)
Race/Ethnicity	
Non-Hispanic White	250 (81.2)
Non-Hispanic Black	7 (2.3)
Hispanic	10 (3.2)
Asian	25 (8.1)
Native American	1 (0.3)
Other	15 (4.9)
Age	
20–29	43 (14.0)
30–39	80 (26.0)
40–49	73 (23.7)
50–59	71 (23.1)
60–69	38 (12.3)
70+	3 (1.0)
Source of Referral	
Self	41 (13.3)
Workplace	159 (51.6)
State Medical Board	19 (6.2)
School (DO, MD, PA, AA)	29 (9.4)
Residency Program (DO, MD)	52 (16.9)
Other†	8 (2.6)
Workplace Involvement in Referral	
Self-referral, no workplace/training program involvement	12 (3.9)
Self-referral, workplace/training program recommended (participant made call)	29 (9.4)
Workplace or other referral, voluntary	43 (14.0)
Workplace or other referral, mandatory	224 (72.7)
Year of Completion	
2015	10 (3.2)
2016	48 (15.6)
2017	49 (15.9)
2018	41 (13.3)
2019	44 (14.3)
2020	53 (17.2)
2021	35 (11.4)
2022	28 (9.1)

(*continued on next column*)

Table 2. (*continued*)

* Surgery category includes neurological surgery (*n* = 8), plastic surgery (*n* = 5), plastic surgery–head and neck (*n* = 1), surgery (*n* = 26), surgery–vascular (*n* = 1), thoracic surgery (*n* = 1). Other category includes dermatology (*n* = 2), ophthalmology (*n* = 3), otolaryngology (*n* = 5), pathology (*n* = 2), physical and rehabilitation medicine (*n* = 2), urology (*n* = 6), medical genetics (*n* = 1). None includes anesthesiology assistant student (7), medical student (15), and physician assistant student (11).

† Other source of referral includes attorney, peer/colleague, and state Physician and Professional Health Program (PHP).

and non-Hispanic White (81.2%). About half of referrals were made by a workplace (51.6%), while 26.3% were referred by a training program. Self-referrals totaled 13.3%, and among these the majority were recommended to self-refer by a workplace or training program. Most had a mandatory referral to CPHP (72.7%).

When compared to the CPHP population referred during the same time period, the group with disruptive behavior was more likely to be male (70.5% vs. 49.7%), more likely to be referred by a workplace (51.6% vs. 16.0%) or a training program (26.3% vs. 19.0%), and more likely to have a mandatory referral (72.7% vs. 37.0%).

The most represented specialties among the group with disruptive behavior were internal medicine, surgery, family medicine, anesthesiology, and orthopedic/sports medicine surgery. Compared to the population of CPHP participants, the disruptive behavior group had more internal medicine physicians (22.5% vs. 13.8%) and anesthesiologists (10.9% vs. 6.9%). Compared to the specialty distribution of physicians in the state of Colorado,[28] specialties overrepresented in the disruptive behavior group included surgery (15.3% vs. 4.7%), internal medicine (22.5% vs. 10.0%), anesthesiology (10.9% vs. 5.3%), and orthopedic/sports medicine surgery (9.1% vs. 1.1%).

Table 3. Psychiatric Diagnoses of Colorado Physician Health Program Participants Who Were Referred and Completed Participation for Disruptive Behavior, 2015–2022 ($N = 308$)

Diagnosis	Primary Diagnosis *n* (%)	Secondary Diagnosis *n* (%)	Tertiary Diagnosis *n* (%)	Total *n* (%)
Adjustment disorder	19 (6.2)	–	–	19 (6.2)
Anxiety disorder	16 (5.2)	7 (2.3)	1 (0.3)	24 (7.8)
Attention deficit/hyperactivity disorder	15 (4.9)	4 (1.3)	1 (0.3)	20 (6.5)
Autism spectrum disorder	3 (1.0)	2 (0.6)	–	5 (1.6)
Bipolar disorder	2 (0.6)	–	1 (0.3)	3 (1.0)
Eating disorder	1 (0.3)	–	–	1 (0.3)
Major depressive disorder	28 (9.1)	12 (3.9)	–	40 (13.0)
Obsessive-compulsive disorder	3 (1.0)	–	–	3 (1.0)
Traumatic stress disorder	7 (2.3)	3 (1.0)	–	10 (3.2)
Substance use disorder	8 (2.6)	–	–	8 (2.6)
None	206 (66.9)	280 (90.9)	305 (99.0)	206 (66.9)

Psychiatric Diagnoses and Treatment Referrals

One third of participants received a psychiatric diagnosis (Table 3). The most common diagnoses were major depressive disorder (13.0%), anxiety disorder (7.8%), attention deficit/hyperactivity disorder (6.5%), and adjustment disorder (6.2%).

The most often recommended treatment was coaching (49.7%), followed by therapy (29.9%), psychiatric treatment (i.e., medication management; 17.2%), and education (14.3%). Few participants were recommended health-related (3.6%) and substance-related (1.3%) treatments, while 20.8% had no recommended treatments (Table 4). The majority (82.1%) received no recommendations for third-party evaluation. The most common third-party evaluations were psychological testing (8.4%) and behavioral evaluations (8.4%).

Participants who received a psychiatric diagnosis compared to those without a psychiatric diagnosis were significantly more likely to receive referrals for therapy (44.1% vs. 22.8%; $p < 0.001$) and psychiatric treatment (37.3% vs. 7.3%; $p < 0.001$). Recommendations for coaching and education did not vary by whether or not there was a psychiatric diagnosis ($p > 0.60$).

Situational Stress

CPHP medical directors reported that 54.9% of the participants were experiencing at least one situational stressor that contributed to their disruptive behavior (Table 5). Most had one stressor (35.4% of all participants), while 13.3% had two stressors, and 6.2% had three stressors. Work-related stress was most common, followed by stress in the personal environment (family, primary relationship). Some of the participants (6.5%) were experiencing a medical condition that caused stress. Work stress was significantly related to gender, reported for 46.2% of women compared to 34.1% of men ($p < 0.05$). Reports of work stress were not significantly related to practice setting, specialty, age, or the presence of a psychiatric diagnosis.

Among those with a psychiatric illness, 37.3% achieved the maximum stress score of 3 compared to 24.3% among those without ($p < 0.05$). Stress scores were not significantly related to specialty, practice setting, gender, or age.

Symptoms of a Personality Disorder

CPHP medical directors reported that 26.3% of participants had symptoms of a personality disorder that contributed to their disruptive behavior. These participants more often had work stress compared to those without symptoms of a personality disorder (46.9% vs. 34.4%, $p < 0.05$). There was no relationship between personality disorder symptoms and receipt of a psychiatric diagnosis or a treatment recommendation, but these participants were more likely to receive a recommendation for a third-party evaluation (29.6% vs. 13.7%, $p < 0.01$). Men were more often reported to have personality disorder symptoms compared to women (29.5% vs. 18.7%, $p < 0.05$).

Mandatory Referrals

Having a mandatory referral (72.7% of the sample) was not significantly related to having a psychiatric diagnosis, receiving a recommendation for treatment, gender, showing symptoms of a personality disorder, or experiencing a stressor. Participants with a mandatory referral were twice as likely as those with voluntary referrals to be recommended for a third-party evaluation (20.5% vs. 10.7%, $p < 0.05$).

Program Completion

Most participants completed their participation within 12 months (57.8%), and an additional 27.9% completed within 2 years. A few participants (4.2%) were involved with CPHP for 4 years or more (Table 6). Participation time was significantly associated with the presence of a psychiatric diagnosis compared to no diagnosis (median 390 vs.

Table 4. Recommended Treatments and Third-Party Evaluations for Colorado Physician Health Program Participants Who Were Referred and Completed Participation for Disruptive Behavior, 2015–2022 (*N* = 308)*

Treatment	Treatment 1 *n* (%)	Treatment 2 *n* (%)	Treatment 3 *n* (%)	Total *n* (%)
Coaching	132 (42.9)	21 (6.8)	–	153 (49.7)
Therapy	65 (21.1)	19 (6.2)	8 (2.6)	92 (29.9)
Psychiatrist	26 (8.4)	26 (8.4)	1 (0.3)	53 (17.2)
Education	15 (4.9)	26 (8.4)	3 (1.0)	44 (14.3)
Health-related	3 (1.0)	6 (1.9)	2 (0.6)	11 (3.6)
Substance-related	3 (1.0)	1 (0.3)		4 (1.3)
No treatment recommendations	64 (20.8)	209 (67.9)	294 (95.5)	64 (20.8)
Third-Party Evaluations and Specialized Assessments	**Evaluation 1 *n* (%)**	**Evaluation 2 *n* (%)**	**Evaluation 3 *n* (%)**	**Total *n* (%)**
Behavioral IP or OP	25 (8.1)	–	1 (0.3)	26 (8.4)
Psychiatric IP or OP	1 (0.3)	–	–	1 (0.3)
Neuropsychological testing	4 (1.3)	2 (0.6)	–	6 (1.9)
Specialist medical consultation	4 (1.3)	2 (0.6)	–	6 (1.9)
Psychological testing	21 (6.8)	5 (1.6)	–	26 (8.4)
No third-party evaluation recommendations	253 (82.1)	299 (97.1)	307 (99.7)	253 (82.1)

* Up to three treatments and three third-party evaluations were recorded for each participant.IP, inpatient; OP, outpatient.

Table 5. Prevalence of Situational Stressors for Colorado Physician Health Program Participants Who Were Referred and Completed Participation for Disruptive Behavior, 2015–2022 (*N* = 308)

Stressor	n (%)*
Work†	116 (37.7)
Family	57 (18.5)
Primary relationship/marital	26 (8.4)
Medical condition (self)	20 (6.5)
Illness in family member	10 (3.2)
Financial	6 (1.9)
Loss	4 (1.3)
Other relationship	2 (0.6)
Other‡	7 (2.3)
None	139 (45.1)

* Percentages total to over 100%; up to three stressors were reported per participant.
† Includes burnout and malpractice issues.
‡ Includes COVID-19, civil unrest, and challenges with home/moving/relocation.

Table 6. Length of Participation for Colorado Physician Health Program Participants Who Were Referred and Completed Participation for Disruptive Behavior, 2015–2022 (*N* = 308)

Length of Participation (months)	*n* (%)
< 6	52 (16.9)
6–12	126 (40.9)
13–18	53 (17.2)
19–24	33 (10.7)
25–36	25 (8.1)
37–48	6 (1.9)
48–60	3 (1.0)
61–72	3 (1.0)
> 73	7 (2.3)

279 days; $p < 0.001$). Personality disorder symptoms were associated with longer participation (median 402 days compared to 283 days without personality disorder symptoms; $p < 0.01$). Mandatory participants had a median participation of 338 days compared to 285 days among voluntary participants ($p < 0.05$).

Almost all participants successfully completed their participation by following through with CPHP evaluation and/or monitoring and receiving a clinical determination that they were safe to practice without further CPHP intervention (95.1%), while 2.9% declined treatment or evaluation recommendations but were still determined to be safe to practice. A few participants (1.9%) were deemed unsafe to practice due to noncompliance. These were reported to the Colorado Medical Board or their training program. Most of these lost their license or, if a trainee, were dismissed from their academic program.

DISCUSSION

Understanding and addressing disruptive behavior is critical for maintaining the health of physicians and other healthcare providers, career development, and the maintenance of stable, effective healthcare settings. We found that some medical specialties, particularly surgery, anesthesiology, and internal medicine, were overrepresented among those referred for disruptive behavior. Several other studies have found that disruptive behavior is identified more commonly among surgeons.[12,13,29] Specialties such as these function in environments that may be more stressful and unpredictable, leading to higher levels of burnout.[5,30] The most common work setting was a hospital. There are several aspects of the hospital environment that may lead to greater identification and referral for disruptive behavior, including the dependency on teamwork within a diverse set of professionals, the greater observability of behavior, the more structured environment, and the potential that policies may be more strictly enforced.

Students comprised about 10% of the disruptive behavior population, which reflects the distribution of practicing healthcare providers compared to students in Colorado.[28] Early career interventions, particularly during training, are pivotal in promoting healthy behaviors, future professional behavior, and in reducing stigma related to mental health. CPHP has longstanding relationships with and does extensive outreach to training programs throughout the state.

In our analysis, 29.5% of those referred for disruptive behavior were women, which is similar to the proportion of female physicians in Colorado over this time period (35%–40%).[28] Stress and burnout are higher among female physicians compared to male physicians,[31,32] and in our analysis significantly more women were experiencing workplace stress than men. Studies have shown that higher rates of stress in female physicians are driven by higher patient expectations, resulting in longer appointment times and more electronic communication with patients, among other things. These are in addition to typically greater duties at home for women compared to men.[32–34]

We found that 33.1% of the participants had one or more psychiatric diagnoses, with the most frequent being major depressive disorder. Higher stress levels were reported for those with a psychiatric diagnosis. Our findings are consistent with two other studies of disruptive behavior that found high levels of psychiatric illness. In a state monitoring program, 75.9% of those with disruptive behavior had one or more Axis I psychiatric disorders, and 72.2% had a diagnosis, traits, or features of one or more personality disorder clusters.[21] In a treatment program for disruptive behavior, Neff found high levels of history of emotional or physical abuse, major depression, and personality disorders or traits.[22]

The contribution of psychiatric disorders to disruptive behavior is understudied. Oliveira and colleagues reviewed 70 published studies of disruptive behavior, and only 4 examined psychiatric disorders.[35] As emphasized by Brown et al., substance use has been regarded as an important contributor to disruptive behavior, but other psychiatric morbidities may be more important.[17] In our study, only 2.6% were diagnosed with a substance disorder, while 30.5% received other psychiatric diagnoses.

Coaching was recommended to half of those with disruptive behavior, and an additional 14.3% were recommended for education. These interventions are largely focused on learning strategies to modify behavior and have been the primary approach to disruptive behavior.[36–42] Although focusing on the behavior itself is appropriate and expected, it is noteworthy that nearly half of our population was referred for psychiatric treatment (medication) and/or therapy, indicating a need for interventions that extend beyond changing the behavior itself, with attention to underlying conditions that may have gone previously unrecognized and can affect the ability to change behavior. As would be expected, recommendations for psychiatric treatment and therapy were significantly more common for those with a psychiatric diagnosis, and participation times were longer. Thorough evaluations allow individualized treatment recommendations to be made that may increase the likelihood of a successful outcome.

Relatively few participants received recommendations for third-party evaluations or testing. A CPHP medical director conducted a thorough psychiatric evaluation upon intake for every participant. Participants who showed signs of a personality disorder were more likely to be referred for third-party assessments. Other PHPs may not have the internal capacity for such in-depth evaluations and may need to rely to a greater extent on external evaluations. For some disruptive behavior cases, the workplace explains that this is the last chance for the participant to remediate their behavior. For these cases, CPHP may recommend a third-party or specialized evaluation to provide the best chance for success.

In this group with disruptive behavior, 18.5% received no recommendations for treatment or additional third-party evaluations. For these participants, their medical director determined that the CPHP evaluation, or evaluation plus behavioral monitoring (ongoing appointments with the participant and communication with the workplace to track behavior), was sufficient. An example of a participant only needing evaluation is a physician who is self-referred due to a complaint of several episodes of profane communication during late-night calls that followed their fifth night in a row on call. On their own initiative and prior to the CPHP evaluation, the physician sought out a communications course and had no subsequent outbursts following the event. A recommendation in a case like this might also include modifying the call schedule to avoid ongoing problems. An example of a participant for which evaluation and behavioral monitoring might be suf-

ficient is a physician who is referred due to terse interactions with clinic staff brought on by stress and secondary irritability. During the CPHP evaluation, the participant identified changes that could be implemented in their personal and professional lives. During six months of subsequent behavioral monitoring at the workplace, these strategies were successful, and there were no further episodes of disruptive behavior.

More research is needed on the influence of the practice setting on disruptive behavior and how changes in practice settings over recent decades may have contributed to disruptive behavior while also increasing the identification and action on disruptive behavior. Recent trends in which smaller group-owned or private practices have consolidated or been acquired by larger systems, including private equity–owned corporations, have resulted in increased patient loads, higher administrative burdens (including the integration of electronic health records, use of computers, and changing methods of reimbursement), and greater time demands for healthcare providers. These have raised levels of stress and frustration. At the same time, larger systems typically have greater oversight of and attention to behavior.[43] We found that over half of those referred for disruptive behavior were experiencing a situational stressor that contributed to their disruptive behavior, and workplace stress was most common. When workplace stress coincides with disruptive behavior, this can cause additional stress for both the individual exhibiting the behavior and others in the workplace. Although addressing the behavior itself is likely to have benefit, it is crucial to also address the system-level factors that result in stress and burnout in the workplace.[14,43–47]

In addition to the profound effect of stress within the workplace, we found that many other sources of stress were experienced by this population, including family system, marital, health-related, financial, and family health stressors These findings again underline the importance of thorough evaluations when addressing disruptive behavior. Participants may benefit from multiple types of referrals for treatment, assessment, and resources in addition to addressing the immediate problem of their workplace behavior.

Limitations

This analysis has limitations. Foremost, we relied on records kept by CPHP medical directors and clinicians that were not initiated for research purposes. The experience of situational stress by participants was coded as perceived by CPHP medical directors and may not be consistently assessed or reflect the stress perceived by the participants. Symptoms of a personality disorder were captured retrospectively during the compilation and analysis of data. This may have led to inconsistencies in assessment and recording. We included only those participants who were referred for a primary presenting problem of disruptive behavior. There may be others who exhibited disruptive behavior but were referred to CPHP for another primary presenting problem. Where we found significant relationships between variables (for example, between gender and workplace stress), we cannot speak to causality. We did not assess recurrence of disruptive behavior after program completion.

CPHP is one of the first, largest, and longest-standing PHPs in the United States and has built relationships with healthcare systems and training programs in Colorado over several decades. It also has considerable internal resources not available to some other programs, including multiple experienced medical directors and master's-level clinicians. In addition, each PHP is different in its regulatory environment, funding arrangements, and ability to provide confidential care. These differences among state-level PHPs may affect the volume and nature of referrals for disruptive behavior and may limit the generalizability of our findings to other PHPs. Still, the descriptions of disruptive behavior cases at CPHP presented in this article can provide insight for other PHPs and entities that address disruptive behavior in medical settings.

CONCLUSION

Disruptive behavior can have root causes in numerous intrapersonal, interpersonal, and environmental factors, but methods to address it have predominantly focused on changing the behavior itself through education and coaching, with some attention to the working environment that may have contributed to the behavior.[1,12,18,36–42,48] There has been minimal focus on conducting thorough evaluations of those exhibiting disruptive behavior to identify underlying factors. In this population of healthcare providers who were referred to the state-level physician health program in Colorado, we identified numerous underlying issues that may have contributed to or were manifested as disruptive behavior, including psychiatric conditions, health conditions, stress, personality challenges, and the workplace environment. Thorough evaluation and collection of collateral information can identify the complex array of factors that may be present in each case of disruptive behavior. Understanding these factors can aid in developing multifaceted, personalized treatment plans that address both the coexisting factors and the disruptive behavior.

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

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REFERENCES

1. Williams BW, Williams MV. Understanding and remediating lapses in professionalism: lessons from the island of last resort. Ann Thorac Surg. 2020;109:317–324.
2. Rehder KJ, et al. Associations between a new disruptive behaviors scale and teamwork, patient safety, work-life balance, burnout, and depression. Jt Comm J Qual Patient Saf. 2020;46:18–26.
3. Joint Commission. Behaviors That Undermine a Culture of Safety. Sentinel Event Alert, Issue 40. Jul 9, 2008. (Updated: Jun 18, 2021). Accessed Apr 15, 2026. https://www.jointcommission.org/en-us/knowledge-library/newsletters/sentinel-event-alert/issue-40.
4. Committee Opinion No. 683: Behavior that undermines a culture of safety. Obstet Gynecol. 2017;129:e1–e4.
5. Moreno-Leal P, et al. Disruptive behavior at hospitals and factors associated to safer care: a systematic review. Healthcare (Basel). 2021 Dec 23;10:19.
6. John PR, Heitt MC. Disruptive physician behavior: the importance of recognition and intervention and its impact on patient safety. J Hosp Med. 2018;13:210–212.
7. 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.
8. Hastie MJ, et al. Disruptive behavior in medicine: sources, impact, and management. Anesth Analg. 2020;131:1943–1949.
9. Harolds JA. Quality and safety in healthcare, part LXXIII: introduction to disruptive behavior in physicians and other healthcare workers. Clin Nucl Med. 2021 Dec 1;46:989–990.
10. Villafranca A, Fast I, Jacobsohn E. Disruptive behavior in the operating room: prevalence, consequences, prevention, and management. Curr Opin Anaesthesiol. 2018;31:366–374.
11. Villafranca A, et al. Abusive behaviour in Canadian and US operating rooms. Can J Anaesth. 2019;66:795–802.
12. Wolman RL, Kras JF. Ethical approach to the abusive/disruptive physician. Anesthesiol Clin. 2024;42:661–671.
13. Heslin MJ, et al. Is disruptive behavior inherent to the surgeon or the environment? Analysis of 314 events at a single academic medical center. Ann Surg. 2019;270:463–472.
14. Rosenstein AH. The link between physician stress, burnout, and disruptive behaviors. J Med Pract Manage. 2023;38:163–166.
15. Gerlach KE, Phalak KA, Parikh JR. The disruptive radiologist. Clin Imaging. 2022;87:5–10.
16. Burroughs J. Redesign the Medical Staff Model. A Guide to Collaborative Change. Chicago: Health Administration Press, 2015.
17. Brown SD, Goske MJ, Johnson CM. Beyond substance abuse: stress, burnout, and depression as causes of physician impairment and disruptive behavior. J Am Coll Radiol. 2009;6:479–485.
18. Peisah C, et al. Pragmatic systemic solutions to the wicked and persistent problem of the unprofessional disruptive physician in the health system. Healthcare (Basel). 2023 Sep 1;11:2455.
19. Williams BW, Rankin P, Williams M. Understanding disruptive behavior in the seasoned clinician. Physician Leadersh J. 2016;3:58–60.
20. Federation of State Physician Health Programs. Home page. Accessed Apr 15, 2026. https://www.fsphp.org/.
21. Merlo LJ, et al. Psychiatric conditions affecting physicians with disruptive behavior. *Psychiat Times*. Epub 2014 Nov 18. Accessed Apr 15, 2026. https://www.psychiatrictimes.com/view/psychiatric-conditions-affecting-physicians-disruptive-behavior.
22. Neff KE. Understanding & managing physicians with disruptive behavior. Presented to the Foundation for Medical Excellence, Oct 19, 2012. Accessed Apr 15, 2026. https://www.slideshare.net/tfme/kent-neff-friday-plenary-understand-managing.
23. Dyrbye LN, Satele D, Shanafelt T. Ability of a 9-item Well-Being Index to identify distress and stratify quality of life in US Workers. J Occup Environ Med. 2016;58:810–817.
24. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001;16:606–613.
25. American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders, 5th ed. Arlington, VA: APA, 2013.
26. DS Im, Tamarelli CM, Shen MR. Experiences of physicians investigated for professionalism concerns: a narrative review. J Gen Intern Med. 2024;39:283–300.
27. Reynolds NT. Disruptive physician behavior: use and misuse of the label. J Med Regul. 2012;98:8–19.
28. Association of American Medical Colleges. U.S. Physician Workforce Data Dashboard. 2024. Accessed Apr 15, 2026. https://www.aamc.org/data-reports/report/us-physician-workforce-data-dashboard.
29. Campos M, et al. Disruptive behavior in the operating room: systemic over individual determinants. Int J Surg Open. 2022;43:100492.
30. Shanafelt TD, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. Arch Intern Med. 2012 Oct 8;172:1377–1385.
31. Lyubarova R, Salman L, Rittenberg E. Gender differences in physician burnout: driving factors and potential solutions. Perm J. 2023 Jun 15;27:130–136.
32. Karakcheyeva V, et al. The well-being of women in healthcare professions: a comprehensive review. Glob Adv Integr Med Health. 2024 Feb 10;13:2753613024123929.
33. Sears DM, et al. Leadership development as a novel strategy to mitigate burnout among female physicians. PLoS One. 2025 Mar 18;20:e0319895.
34. Trockel MT, et al. Impact of work on personal relationships and physician well-being. Mayo Clin Proc. 2024;99:1567–1576.
35. Oliveira RM, et al. Analyzing the concept of disruptive behavior in healthcare work: an integrative review. Rev Esc Enferm USP. 2016;50:695–704.
36. 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.
37. Harolds JA. Quality and safety in healthcare, part LXXIV: combating disruptive behavior in healthcare workers. Clin Nucl Med. 2022 Jan 1;47:e1–e3.

38. McLaren K, Lord J, Murray S. Perspective: delivering effective and engaging continuing medical education on physicians' disruptive behavior. Acad Med. 2011;86:612–617.
39. Swiggart WH, et al. A professional development course improves unprofessional physician behavior. Jt Comm J Qual Patient Saf. 2020;46:64–71.
40. Kharasch M, et al. A physician conduct improvement program to address disruptive behavior in a health care setting. Am J Med Qual. 2025;40:266–273.
41. Gautham KS. Addressing disruptive and unprofessional physician behavior. Jt Comm J Qual Patient Saf. 2020;46:61–63.
42. Chen AM. Evidence-based framework for the management of disruptive physician behavior. J Healthc Risk Manag. 2025;45:26–32.
43. Williams BW, Welindt D. Assisting physicians who exhibit disruptive behavior: understanding the costs, contributors, and corrections. Australas Psychiatry. 2023;31:132–135.
44. Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout. Mayo Clin Proc. 2017;92:129–146.
45. Shanafelt TD, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2017. Mayo Clin Proc. 2019;94:1681–1694.
46. Stehman CR, et al. Burnout, drop out, suicide: physician loss in emergency medicine, part 1. West J Emerg Med. 2019 Apr 23;20:485–494.
47. Shanafelt TD, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2020. Mayo Clin Proc. 2022;97:491–506.
48. Ramirez RN, et al. AOA Critical Issues Symposium: the disruptive physician: bad apple or toxic tree? J Bone Joint Surg Am. 2025 Jan 1;107:104–110.