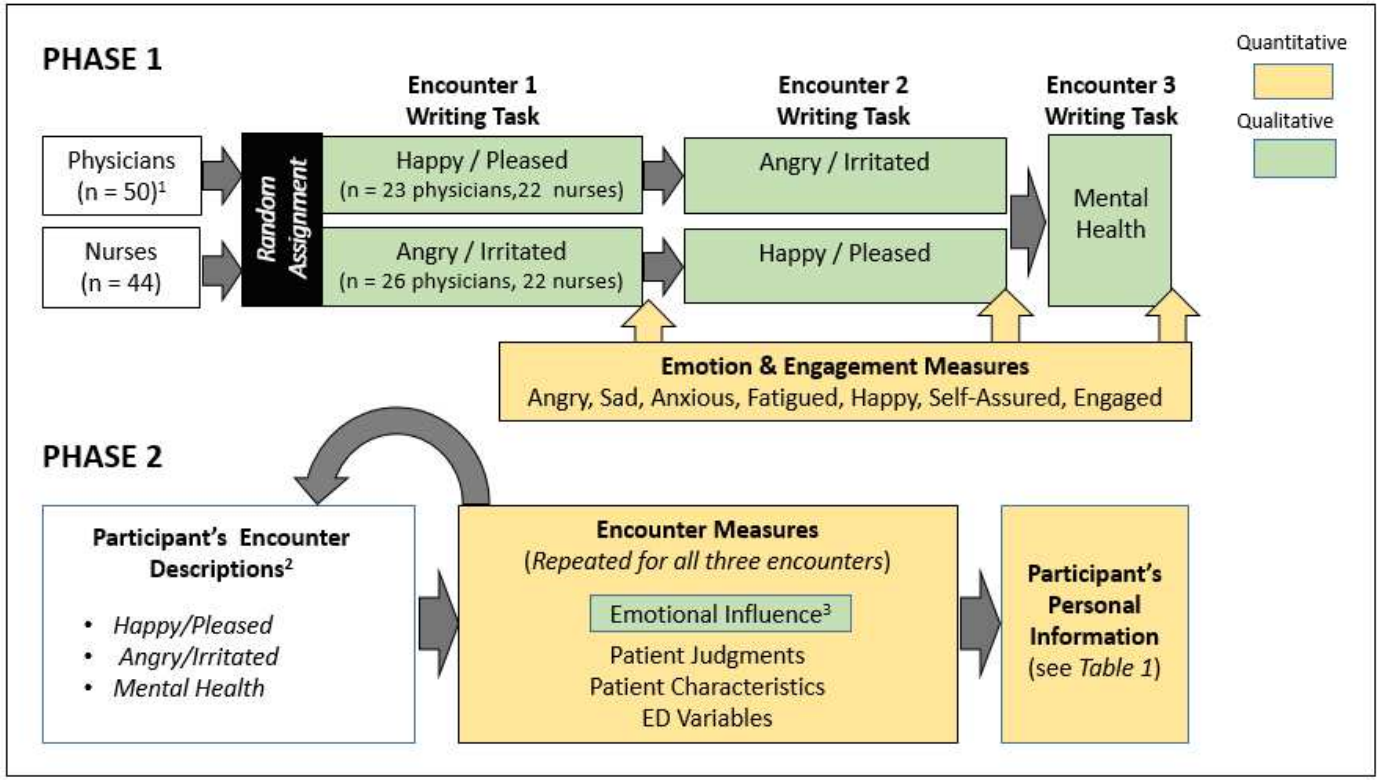
SUPPLEMENTARY DOCUMENT

Figure S1. Study Design and Flow



[1] Due to an error, one physician was sent two links for the experiment and was randomly assigned to the two different order conditions. This participant's data was merged to create one data file and the data are included in all analyses except for those that include order as an independent variable.

[2] In Phase 2, participants were presented with each encounter description they wrote in Phase 1 in a randomly determined order. Following the presentation of each encounter description, participants completed the encounter measures and then were presented with their next encounter description.

[3] As noted in the text, emotion influence data were obtained for a subset of the sample (n=72)

PATIENT ENCOUNTER EMOTION-ELICITATION TASK INSTRUCTIONS

Happy, Appreciated, Pleased Encounter Instructions

Please think about the last few months that you have been working in the Emergency Department (ED). Think about some of the patient experiences you have had during this time, and choose one experience that led you to **feel happy, appreciated, or pleased**, **and continues to make you feel this way even when you think about it today**. Please take time to imagine again what this experience was like and try to relive it again in your mind's eye. **Then describe the patient and this experience as vividly and in as much detail as you can for at least the next 6-8 minutes.**

The following questions may help you with this task:

- What happened and why?
- What were you feeling?
- Did your experience with this patient set off some thoughts that enhanced your feelings? What were they?

In the box below, please write as vividly, as openly, and in as much detail as you can.

**** Remember that your responses will never be associated with your name!**

Irritated, Frustrated, Angry Encounter Instructions

Please think about the last few months that you have been working in the Emergency Department (ED). Think about some of the patient experiences you have had during this time, and choose one experience that led you to **feel irritated, frustrated, or angry**, **and continues to make you feel this way even when you think about it today**. Please take time to imagine again what this experience was like and try to relive it again in your mind's eye. **Then describe the patient and this experience as vividly and in as much detail as you can for at least the next 6-8 minutes.**

The following questions may help you with this task:

- What happened and why?
- What were you feeling?
- Did your experience with this patient set off some thoughts that enhanced your feelings? What were they?

In the box below, please write as vividly, as openly, and in as much detail as you can.

**** Remember that your responses will never be associated with your name!**

Mental Health Encounter Instructions

We would now like you to think about your last few months working in the ED one last time. This time, please think about your experiences **with patients with mental health conditions (who presented either with or without a physical health concern)**. Choose one patient experience and imagine again what this experience was like and try to relive it again in your mind's eye. **Then describe the patient and this experience as vividly and in as much detail as you can for at least the next 6-8 minutes.**

The following questions may help you with this task:

- What happened and why?
- What were you feeling?
- Did your experience with this patient set off some thoughts that enhanced your feelings? What were they?

In the box below, please write as vividly, as openly, and in as much detail as you can.

**** Remember that your responses will never be associated with your name!**

Exploratory Analyses: Emotional Tone in Patient Encounter Descriptions Using Linguistic Text Analysis

To assess overall emotional tone in patient encounters, we subjected providers' encounter descriptions to quantitative text analysis using the Linguistic Inquiry and Word Count software (LIWC 2015 [1]). LIWC is the most commonly used method for sentiment analysis in the behavioral sciences and has been used in hundreds of studies,[2] including recent medical studies.[3-7] Strong links exist between language use in text (assessed with LIWC) and the state of mind of the writer [8] and LIWC provides a valid and reliable method for assessing emotional expression.[9,10] For each encounter, LIWC produced an emotional tone variable, which captures the relative use of positive (e.g., happy) and negative words (e.g., hate).[11] Emotional tone is represented as a percentile derived from standardized scores acquired from large samples. An emotional tone of 0 is extremely negative, 100 is extremely positive, and 50 reflects either lack of emotion or ambivalence.

Emotional Tone in Encounter Descriptions

To assess differences in emotional tone in encounter descriptions, we analyzed emotional tone in the three encounters as a function of participant profession (physician vs nurse) and encounter order (see Figure S1) using repeated measures ANOVA. Emotional tone significantly varied across encounters, Greenhouse-Geisser corrected $F(1.86, 165.69)=106.98$, $p<0.001$, $\eta^2_p=0.55$. Emotional tone in positive encounters was significantly greater than in angry (62.78 vs 14.75; $p<0.001$; 95% CI 38.69 to 56.95; Cohen's $d=2.02$) and mental health encounters (62.78 vs 20.21; $p<0.001$; 95% CI 32.77 to 51.65; Cohen's $d=1.59$), which did not differ from one another, $p=0.21$.

These results demonstrate that emotional tone in providers' descriptions of angry and mental health encounters were highly negative and considerably lower than the mean emotional tone obtained from analyses of 6,179 writing samples obtained from 2,510 participants (from 29 samples) who were instructed to write about deeply emotional topics (mean=38.60 [1]). This last comparison highlights the very high level of negativity in our encounter descriptions generated by providers in the current study.

Exploratory Hypothesis: Affective Transfer Hypothesis

We next tested an exploratory hypothesis based on research demonstrating that emotion elicited in one situation can transfer to influence evaluations in a subsequent situation.[12-15] To do this, we examined whether the order in which providers described positive versus angry encounters influenced emotional tone in the mental health encounter. Specifically, we analyzed emotional tone in the mental health encounter as a function of participant profession (physician vs nurse) and encounter order using a two-way ANOVA. A significant interaction emerged between encounter order and participant profession, $F(1, 89)=7.997$, $p=0.006$, $\eta^2_p=0.082$. For nurses, emotional tone was more negative if nurses described an angry encounter immediately before the mental health encounter compared to when they described a positive encounter immediately prior to it, (12.27 vs 30.30; p=0.013; 95% CI -32.14 to -3.92; Cohen's d=-0.75). For physicians, emotional tone in the mental health encounter was similar regardless if physicians described an angry or positive encounter immediately prior to it (24.36 vs. 14.71, p=0.156; 95% CI -3.75 to 23.05).

These results point to the possibility that emotions elicited in one experience may carry-over to influence evaluations in a subsequent situation (as we found for nurses), a finding widely supported in the affect literature.[13-16] Findings from a recent large-scale qualitative study with

ED physicians and nurses revealed that such carryover effects likely occur in clinical practice,[17] however the extent to which they occur is unknown. Research is needed to further investigate this possibility as well as potential consequences of such carryover.

Table S1: Correlations among Emotion and Engagement Scales by Patient Encounter Type

A. Positive Patient Encounter[1]

	Angry	Sad	Anxious	Fatigue	Happy	Self-Assured	Engaged
Angry	1						
Sad	0.320**	1					
Anxious	0.371**	0.490**	1				
Fatigue	0.438**	0.388**	0.480**	1			
Happy	-0.180	-0.412**	-0.323**	-0.233*	1		
Self-Assured	0.025	-0.138	-0.344**	-0.015	0.468**	1	
Engaged	-0.007	0.098	-0.104	-0.024	0.258*	0.431**	1

B. Angry Patient Encounter[2]

	Angry	Sad	Anxious	Fatigue	Happy	Self-Assured	Engaged
Angry	1						
Sad	0.410*	1					
Anxious	0.329**	0.480**	1				
Fatigue	0.337**	0.280**	0.356**	1			
Happy	-0.628**	-0.270**	-0.300**	-0.274**	1		
Self-Assured	-0.220*	-0.425**	-0.680**	-0.281**	0.472**	1	
Engaged	-0.290**	0.024	-0.241*	-0.204*	0.351**	0.325**	1

C. Mental Health Encounter[2]

	Angry	Sad	Anxious	Fatigue	Happy	Self-Assured	Engaged
Angry	1						
Sad	0.447**	1					
Anxious	0.493**	0.544**	1				
Fatigue	0.555**	0.399**	0.472**	1			
Happy	-0.482**	-0.499**	-0.559**	-0.410**	1		
Self-Assured	-0.453**	-0.510**	-0.519**	-0.354**	0.653**	1	
Engaged	-0.367**	0.074	-0.118	-0.184	0.140	0.222*	1

[1] n=94 for anxious and happy scales; n=91 for anxious scale; n=93 for all other scales

[2] All n's=94.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table S2: Examples of Providers' Encounter Descriptions (Redacted)

ANGRY ENCOUNTERS
Patient Behaviors
The other day I had a patient with [medical condition] [...] When I went to meet him he told me how much the "nurses in here suck and don't care about him." I apologized for him feeling that way and asked him how I could help. He then began swearing at me that he needed his "fucking pain meds now." I went to doctor and got him pain medication in a timely manner. He continued to get impatient waiting for his MRI [Magnetic Resonance Imaging]. He was swearing at me telling me "you suck" and "everyone in here sucks." He even walked up to the nurse's station to try to fight with the other staff members, making threats to punch people. This made me feel frustrated. I had spent most of my shift paying attention to him and trying to make him happy when I had other patients that were sick and needed my help [...] (123, nurse)
A [patient] came in complaining of […] pain. She stated she was from [distant state] […] and had […]. She even gave me a CD of her "MRI" [Magnetic Resonance Imaging]. Which, of course, I couldn't open on our viewer. I ordered Dilaudid [hydromorphone] for her, which the nurse gave her, and went off to deal with other patients. When I got back to her, I was rushing, and just had time to ask how she felt, to which she said she just wanted another shot, if that was OK. I ordered it, of course. Then I swung back to see how she was, and she had eloped. Hmm. Had I been had? When I had a moment, I pulled the prescription records for her... yep, I'd been had. She was a known IVDU [intravenous drug user], opioid user, etc. Rather than being able to offer her detox and help, I just gave her a fix… because I was too busy and she didn't want help. I felt (and still feel) STUPID, LAZY, and HELPLESS. And I don't like her. (13, physician)
The patient had a [long-term] history of a [condition on finger] [...] It was the first time the primary [care] doctor had seen the finger as the patient had not sought medical care prior. When I evaluated the patient I determined that the [condition] was long standing and not an acute emergency […] He became enraged that I would not have a hand surgeon come in to the ER [emergency room], overnight, on a weekend, to evaluate his chronic [condition]. I tried to repeatedly explain to him that this was not an emergency but he would not listen. Eventually I left the room to discharge him and on my way out the patient, under his breath, called me a "dumb asshole." This really bothered me. I had spent a large amount of time with him trying to get him to the right specialist and trying to explain to him he was not having an emergency, but he took his frustration [out on] me, frustration at waiting for 4 hours to see me only to find out I can't really help him with the finger. (40, physician)
A patient came in who felt he needed an emergent MRI [Magnetic Resonance Imaging] because Dr. Google recommended it. He was demanding, rude to staff, threatening legal action, and yelled at all of us that we didn't know what we were doing. He clearly knows the system and what to say, getting managers and patient advocates involved. It triggered every negative feeling that I have with our job and made my interactions with everyone else difficult. I was thankful when he finally stormed out. (9, physician)
I had a patient that was referred to the ER [emergency room] for antibiotics because she had an infection. The patient had a straight forward […] cellulitis and the plan was to ED Obs [emergency department observation] the patient overnight for IV [intravenous] antibiotics and d/c [discharge] in the morning. Although referred to the ER [emergency room] the patient gave push back the entire time. It was a very busy evening and the patient was in a hall bed but the patient refused all treatment if she wasn't in a room. The patient compared her diagnosis with a life threatening

trauma and demanded that we treat her but was refusing treatment. The interactions with this patient were very frustrating and time consuming. When a patient has such resistance to accepting care you get the feeling of moving on to someone else. This patient required intense verbal redirection to get her to accept care. (124, nurse)
I think the experience that most fits this is taking care of a [patient] I took care of who came in complaining of feeling short of breath. He had been seen in the department at least 10 times in the past couple of weeks, taking an ambulance to the ED [emergency department] every day, saying he was feeling short of breath and dizzy. Each visit, he had been medically screened and cleared to go home. He had not followed up with the providers we had recommended and he had not taken any medications that we had prescribed. He just came in each time with the same complaint as though it was a new emergency. He was a somewhat anxious individual, and while we tried to reassure him, he was still concerned. It was frustrating to take care of him over and over again with no result and no sense that he was going to be proactive in addressing the problem with the specialists. It was also an absurd waste of resources both pre-hospital and in the ED [emergency department].” (138, nurse)
Hospital or System Issues
A patient that comes to mind was […] transferred after receiving [medication], a medication that requires an initial assessment and vital signs every 15 minutes and then hourly for the first 24 hours. These patients are critical and typically, in the ICU [intensive care unit] and intermediate areas, a single nurse takes care of only that patient. In the ED [emergency department] it is different as there are no assigned ratios, typically this isn't a major issue except in cases such as this. Over the course of my time with the patient she had multiple beds assigned then taken away for various reasons that were not made clear to the staff in the emergency department or to the patient. Overall the patient ended up staying over 24 hours in the emergency department and no longer required ICU [intensive care unit] level of care before eventually being transferred to the floor for continued workup. The feeling I had was of overwhelming frustration and stress. As we were in the ED [emergency department] my stress level was higher as throughout my shift this was not my only patient despite this being a 1:1 ratio on the floor and ICU [intensive care unit] […] The frustration of knowing this was an accepted patient transferred to our facility with no plan for where the patient would go on arrival was nearly unbearable. This experience spurred thoughts on how to improve the process for admission of such critical patients. (125, nurse)
POSITIVE ENCOUNTERS
Relationship with Patient and/or Family
The patient encounter that comes to mind and I still think about today was with a patient that just wanted someone to listen […] The patient was a homeless man that had been giving staff a hard time all day. I introduced myself and provided his evening medications and much to my surprise the patient was polite and pleasant, and we began talking […] Twenty minutes standing at his bedside quickly passed as he told me his life story from being [in the…] war, how he got addicted to drugs while serving in the army, to how drugs ruined his life and family when he returned from the war. Not only was I interested in the story but I was amazed by his honesty regarding drug use and the damage that it caused to his life.” (124, nurse)

I took care of a patient […] presenting with […] Bedside ultrasound was strongly indicative of a pulmonary embolism […] The patient had three instances of cardiac arrest but gradually improved to the point that she recovered a BP [blood pressure] into the 120s and a sat [saturation] of 100% on the ventilator and was placed on two pressors [vasopressor medication], which were actually weaned somewhat during her ED [emergency department] stay. She was confirmed to have bilateral massive pulmonary emboli on CT [computerized axial tomography scan], was brought to the ICU [intensive care unit] where she was placed on Veno-arterial ECMO [venoarterial extracorporeal membrane oxygenation]. While her outcome is clearly far from clear at this point, I ran into her husband who stated that he recognized how hard we worked to save his wife's life and stated that he felt that there were not any other emergency departments in the state we live in where she could have gotten that kind of care, as well as felt that we really cared about his wife as an individual. He stated that he understands that she has a rocky road ahead of her but that the outcome would not change this sense of gratitude that he had for the team who took care of her. This made me feel quite happy to have the family realize all that we put into these resuscitative efforts, and it made me feel so good about what we do that not only was this case a great example of how we can sometimes make quite a difference in the ED [emergency department] but that it was so wonderful to have a family appreciate how we put heart and soul into the care of our patients. (3, physician)
A pleasant older man came in with a small laceration that barely needed repair. He waited for a several hours as we were busy, but remained cheerful and smiled during our interaction. He was patient and didn't complain. I gave him options on closure and discussed risks and benefits. He simply said he trusted what I thought was best. He chatted about his family during the suturing, and thanked me and the RN [registered nurse] several times during his visit. It was a pleasure to meet him and it was a very positive experience. (9, physician)
I was taking time to hear a patient describe the ways in which the recent [natural disaster] has ruined her house and the various hardships she was experiencing with being displaced. […] Many of the lengthy personal details about her story were irrelevant to her care, but she thanked me for listening to her and I felt like I was being a good doctor in that moment. She cried, we hugged, I felt like it was a standardized patient encounter from medical school where they try to teach you how to be empathetic. (41, physician)
Success with Patient Care
I had a younger patient come to the ED [emergency department] after a hand injury while at […]. As soon as I saw his hand I knew this was going to be life-altering for him […] It was a difficult case because I had to strongly advocate for this patient to be transferred to another facility that would be better prepped to handle his injuries. […] In the end, I was proud that I was able to strongly advocate for this patient and his father because in that time, that's what they needed, they needed a voice. I felt like a strong nurse doing what we were taught to do.... why nurses exist. We advocate for our patients; we are their voice. (135, nurse)
My background is ultrasound. […] A [patient…] came in short of breath. An EKG [electrocardiogram] was ordered, blood work, and the thought process was to admit. […] So as I often do with dyspneic patients, I do a bed side ultrasound. […] The [colleague] working with me was stunned that we were able to find the diagnosis so quickly. […] Patient did great and was eventually discharged. […] The best way I can describe this is that this was a mike drop moment. Or you can say drop the ultrasound and walk away. I did something that many others […] don't do. Because of ultrasound, and because of my hard work to train and get good at this, I was able to expedite care and make the correct diagnosis in minutes. (2, physician)

I had a male patient who was […] post discharge from a CABG x3 [coronary artery bypass grafting], he came to our same […] hospital with some concerning complaints. […] The MD [medical doctor] was called to the room immediately. I worked quickly to place an IV [intravenous] line and complete a few basic tests we could do at the bedside (ekg [electrocardiogram], labs, fluids, nitro [nitroglycerin]). This patient had concerning heart sounds and just "looked awful." While the physician was at the bedside we called to the hospital that was to receive this patient and arranged for a medical helicopter for transport. We were able to quickly coordinate his transfer. The reason I feel pleased about the interaction with this patient was that as a team we identified and treated this patient in a very serious condition quickly and safely. I was able to keep the patient calm and informed during his short time with me. These are the types of situations that make me enjoy what I do as an RN [registered nurse] in the emergency department. (113, nurse)
MENTAL HEALTH ENCOUNTERS
Patient Behaviors
I don't even know where to begin with this patient. She is a […patient…] with MULTIPLE psychiatric issues including the most manipulative behavior I have ever seen. […] I have personally taken care of her 5 times in the last two months for various complaints […] She now has a care plan that specifically states she is not to receive IV [intravenous] narcotics in our ED [emergency department] (unless clinically required, of course). […] She's usually ready to go back [home] after an Ativan [lorazepam] or a Percocet [acetaminophen/oxycodone] and some Mac n Cheese, but I feel like if we do these things for her we are just feeding into her manipulative behavior. Unfortunately, when she hasn't gotten her way in the past she has literally attacked the staff […] It frustrates me so much that patients think this type of behavior is acceptable in the ED [emergency department]. And, unfortunately, even our "mentally stable" patients behave this way. If they behaved like this anywhere else, they would be in jail. I feel somewhat hopeless that there is no good solution for how to care for this patient. (23, physician)
A [patient] presented for evaluation of suicidal ideation. He stated that he "couldn't take it anymore" and wanted to "pick some bridge and jump". He had been seen in the ED [emergency department] the day before and was evaluated by psychiatry. He was found to not be acutely suicidal and was sent to a crisis center. Once at the crisis center he was (by report of the staff) "not happy with his room" and proceeded to stuff toilet paper into all the toilets on the floor, flooding the lower floors. He was sent back to the ED [emergency department] for psychiatric evaluation. Unfortunately, psychiatry refused to evaluate the patient as "he was fully evaluated by an attending less than 24 hours ago". Case management and social work were intricately involved in the case, but none of us was able to get psychiatry to re-evaluate the patient […] The case was incredibly frustrating as I did think part of the patient's presentation was related to manipulation. However, the patient did act out and continually expressed suicidal ideation, both of which I felt warranted a repeat psychiatry evaluation. Psychiatry cases are rarely straight forward, but this case was something else. Ultimately the patient got the services he needed, but only after far too many phone calls and far too many arguments among physicians. (33, physician)
[Patient] with [chronic physical condition] and schizophrenia (as well as multiple ED [emergency department] visits for psychiatric processes) returns to the ED [emergency department] because he does not like transferred facility. Earlier that day, the patient was already seen by our ED [emergency department] for suicidal ideation. After his section 12 [legal psychiatric hold against a patient's will] was lifted by [psychiatry services], the patient was transferred to a crisis stabilization unit -- however, the patient did not like the place with unclear reasons and came back

to our ED [emergency department]. The patient is well known to our ED [emergency department] and other psychiatric facilities secondary to his behavioral issues (e.g., aggressiveness, recording conversations without agreement). He's one of the "difficult" and "problematic" patients in our ED [emergency department]. While the patient was angry and felt helplessness (and felt isolated -- nobody helps him), we also felt helplessness and frustrated because we have limited options to solve his issue which is complicated by the patient himself, at least partly. Our effort and time were often wasted including this case. Unconsciously, we may learn that we should not spend our effort on these patients because we don't get a positive reward. (37, physician)
A patient […] was placed on a section 12 [legal psychiatric hold against a patient's will] by police at her [child's school]. She was brought in by ambulance with her [children]. She placed on the section 12 [legal psychiatric hold against a patient's will] after presenting extremely paranoid and threatening to hurt school staff. Upon arrival the ED [emergency department], she is calm and somewhat cooperative. She agreed to have labs drawn but refused to change [out of her clothes]. Lab draws and changing is part of our hospital policy. Mind you this whole time she is intermittently breast feeding. She had no diapers with her […] So on top of my already stressful shift, I was constantly having to double check to make sure the [children] were safe. I had to find diapers and baby clothing within the hospital. Find toys for them to play with. Find a breast pump because she was breast feeding. Help determine who would be caring for the children. While continuing to assess the patient, because who knew if she may try and harm the children. The whole situation was a nightmare that left me feeling defeated, frustrated, and sad. (129, nurse)
I had a [patient] in the mental health area in the emergency room for suicidal ideations but also had substance abuse problems. Usually I am more timid and reserved when working with this population due to the concern of being unsafe. With this patient I could tell he really needed someone to talk to and I knew that the mental health counselors were very busy and would not be doing their evaluation on him for a few hours. Once I felt that I was safe I took the time to sit and talk with this patient. After speaking with him for a little while he thanked me and stated, "Most nurses will judge me by my situation and my substance abuse problems and you didn't." This made me happy to hear that he appreciated how I was treating him and made me feel good that I took the time to listen to him. It also made me sad to think that some of these patients may feel judged by nurses and don't get to express how they feel and share their story. At the end of the day it felt rewarding that I was able to be a listening ear and change his perception on "all nurses". I also understand that working with this population can be dangerous, scary and often times frustrating. (109, nurse)
… a [patient] came in with suicidal ideation. She denies ingesting any drugs or medication in an attempt to kill herself. She had a plan to jump in front of traffic. She had a mildly/moderately blunted affect but just seemed...sad. She was pleasant, would answer all questions earnestly, but just seemed to have given up. She had normal vitals and benign, non-focal exam. We did a usual work-up for medical clearance and were able to have social work disposition her to an in-patient psych facility. We see a lot of psych patients--Suicidal, homicidal, personality disorders, etc. etc. I think most of our patients have some psych components […]. Many of our patients with suicidal ideation simply have poor coping skills and few resources--they're hungry, sad, homeless, want food, a warm bed, etc. This girl struck me as one of the true suicide risks I have seen in the last 4-5 months. She was despondent but still trying to be helpful. I think she felt even worse for thinking that she was inconveniencing us. She wasn't trying to manipulate us, wasn't there for secondary gain, wasn't mean or nasty, she was just hurting, had nowhere else to turn, and was desperately seeking help. Aside from this downturn she was normal, functioning, successful. I think I could identify with her in ways that I couldn't with many of our other psych patients who are homeless, drug addicts, barely functioning for years of their lives. My heart really went out to her. I felt sad because of what she was going through (and likely because I could identify with her). I also felt good in that I was doing everything I could to

facilitate her treatment and turn her around, and I felt that she had such hope for an amazing life if she could simply overcome this terrible time in her life. (44, physician)
Issues with Family Members
Pre-teen sent from […] with suicidal ideation. Had it for […] months but only told mom that day [....] taken to […] sent to ER [emergency room]. Long wait, family frustrated. Patient considered OD [overdose] as means [...] therefore I ordered blood test for aspirin and Tylenol [acetaminophen]. Parents said they promised child no blood would be drawn and despite my concerns refused. Also threatened to leave because of the wait to see a psychiatric clinician. Was, as is often the case, frustrated with their lack of patience in an obviously chaotic environment and while attempting to ensure their child was no in imminent harm from his depression. Wanted to say that I didn't make them come to the ER [emergency room] but now their child was my responsibility and his safety, not their convenience, was my primary concern. Didn't say this, repeatedly apologized for the delay (which I couldn't control), thanked them for their patience, and reemphasized the importance of the visit with the [psychiatric] clinician. Sometimes I tire of putting on the show to get people to do the right thing...wish patients would participate in their care and accept responsibility to their care. (19, physician)
We had a child who was about […] come in via ambulance from summer school after punching a teacher in the face. The police came in behind the ambulance and informed us that he goes through periods where he is completely fine and then he lashes out. The patient was initially fine and placed in a room where the triage was completed. His mother came in […]. The patient started raising his voice at his mother stating, "Why did you even have me, I didn't ask to be here, why did you do this to me, why did you put me here". It was honestly probably one of the saddest things I have ever seen. The mother was of course crying and the pain and sadness in the child's voice was so evident. The child started to escalate and security was called, we all went in the room and someone grabbed the restraint chair. The child started kicking and punching and he needed to be restrained. He started screaming, "I'll fucking kill you and all your family, I will fucking bomb this whole hospital". After a lengthy struggle we gave the child medication while he was on the floor being pinned down, and then about 10 minutes later we lifted him into the chair. It was heartbreaking and nerve wracking for us, our other patients, and more than anything his mother, who I am sure felt helpless. In this case I felt more pain, and sadness than anything. (104, nurse)
Hospital or Systems Issues (and Patient Behaviors)
A few months ago myself and another nurse triaged a suicidal [patient] who we knew was sincere about his desire to die. He was so despondent about relapsing after being off heroin [diamorphine] for several months. Our EMH [emergency mental health] department was filled so we sent him to the regular ED [emergency department] where he was assigned a hallway bed with a 1:1 sitter (who was actually watching 3 other patients). The other triage nurse and I both commented how we really felt sad for him. A few hours later we learned he went into the bathroom and […injured himself]. He was made a trauma; fortunately, he was sutured and able to go to EMH [emergency medical services]. This made me angry and sad. Angry that the opioid crisis is still going strong, angry that we don't have more Emergency Mental Health beds, more in-patient psych beds (my hospital chose to close [numerous] psych beds last year! Shame!), angry that we don't have enough staff to provide 1:1 observation for a suicidal person, angry that there are not more, affordable rehab beds for people with substance abuse problems […] (120, nurse)

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I had [a patient] who presented with a manic episode. He was being observed in our ED [emergency department] awaiting psychiatric placement. I saw him in the morning - when I saw him he was obviously manic, chronically ill with signs of […] multiple medical issues, multiple allergies to anti-psychotic meds. On my evaluation he was yelling and screaming at the nurses and requesting restraint. I did my best to consult with the psychiatric team to determine best chemical restraint for this patient, but to no avail. We gave him all the meds [medications] he could tolerate and he continued to yell, at one-point defecating in the room and spreading it all around himself. What was so difficult about this situation was my/ our inability to deal effectively with this patient's active behavioral issues, which led to lots of frustration from the nursing staff. This frustration became directed at the care team (MDs [medical doctors]) and nursing kept requesting meds [medications]/restraint that were not safe for this patient. An additional point of frustration was the psychiatry consult's narrowing through their consult of our medication options. We were essentially stuck in the middle between nursing and psychiatry with no real viable options. The patient continued to be extremely difficult and required verbal de-escalation multiple times during a very busy shift. This went on for the entire 3 days he boarded in our ED [emergency department] awaiting inpatient psychiatric placement. (12, physician)

Patient Demographics and Emergency Department (ED) Conditions During Encounters

As shown in Table S3, providers were equally likely to describe male versus female patients in each encounter type (p=0.32; χ^2 test), and patients of different races/ethnicities (p=0.67; χ^2 test); however, patients described in positive encounters were older than those in mental health encounters (50.01vs 35.66; p<0.001; Cohen's d=0.71). Similarly, patients in angry encounters were older than those in mental health encounters (43.33 vs 35.66; p=0.01; Cohen's d=0.47). Patients did not differ significantly in age between positive and angry encounters (p=0.12).

Additionally, as shown in Table S4, different encounter types were equally likely to occur during different Emergency Department (ED) shifts (p=0.67; χ^2 test), and at similar times during shifts, F<1; however, the ED was rated as busier during angry encounters compared to positive and mental health encounters (0.73 vs 0.60 vs 0.59), Greenhouse-Geisser corrected F(1.64, 139.37)=12.94, p<0.001, η^2_p=0.13. In addition, nurses overall reported the ED to be busier when seeing all types of patients compared to physicians (0.70 vs 0.59; p<0.001).

Table S3: Demographics of Patients by Patient Encounter Type

	Positive Encounter	Angry Encounter	Mental Health Encounter	Test of Difference
Patient Mean Age[1] (SD) Range (Median) (n=92)	50.01 (25.03) 0 - 99 (51)	43.33 (17.15) 5 - 80 (43.50)	35.66 (15.70) 2 - 75 (35)	$F(2,182)=12.27$, $p<0.001$, $\eta^2_p=0.12$
Patient Gender				
Male	42 (44.7%)	53 (56.4%)	46 (48.9%)	$p=0.32$; χ^2 test
Female	49 (52.1%)	40 (42.6%)	47 (50.0%)	
Missing Data	3 (3.2%)	1 (1.1%)	1 (1.1%)	
Patient Race[2]				
White	72 (76.6%)	66 (70.2%)	62 (66.0%)	$p=0.67$; χ^2 test
Black	10 (10.6%)	14 (14.9%)	15 (16.0%)	
Hispanic	6 (6.4%)	5 (5.3%)	7 (7.4%)	
Asian	-	1 (1.1%)	1 (1.1%)	
Other	3 (3.2%)	2 (2.1%)	5 (5.3%)	
Unknown	1 (1.1%)	4 (4.3%)	3 (3.2%)	
Missing Data	2 (2.1%)	2 (2.1%	1 (1.1%)	

[1] For age, if a provider wrote an age estimate (e.g., "20s:" or "20-30"), we re-coded it to be the midpoint of the age range for analyses (e.g., " 25"). This occurred infrequently and results are analogous if these providers are excluded from this analysis. Patients in positive encounters were significantly older than patients in mental health encounters ($p<0.001$; 95% CI 7.22 to 21.47; Cohen's $d=0.71$). Patients in angry encounters were also significantly older than patients in mental health encounters ($p=0.01$; 95% CI 1.42 to 13.91; Cohen's $d=0.47$). Patients did not differ significantly between positive and angry encounters ($p=0.12$) (all tests were Bonferroni corrected).

[2] To compute χ^2, we collapsed across Asian, Other, and Unknown Race categories (and treated them together as "Other") given the low frequencies.

Table S4: Emergency Department (ED) Conditions During each Patient Encounter Type

	Positive Encounter	Angry Encounter	Mental Health Encounter	Test of Difference
Shift[1]				
Day Shift	52 (55%)	49 (52%)	56 (60%)	p=0.67; χ2 test
Night/Eve Shift	40 (43%)	41 (44%)	36 (38%)	
Other	1 (1%)	4 (4%)	2 (2%)	
Missing Data (n=94)	1 (1%)	-	-	
Mean time in shift when first saw patient[2] (SD) (n=84)	0.42 (0.28)	0.42 (0.27)	0.43 (0.26)	F(2, 160)<1
Mean busyness of ED when first saw patient[3] (SD) (n=85)	0.59 (0.26)	0.73 (0.20)	0.59 (0.22)	F(1.65, 33.33)=14.18, p<0.001, η^2_p=0.15

[1] Question: "At approximately what point in your shift did you first see this patient?" Providers were equally likely to see each of the different patients they described during a day shift versus a night/evening shift, p=0.67; χ2 test. Results are similar for nurses and physicians, all χ^2s<1.

[2] Question: "At approximately what point in your shift did you first see this patient?" Providers responded using a sliding scale from beginning (0) to middle (0.5) to end (1).

[3] Question: "How busy was the Emergency Department when you saw this patient?" Providers responded using a sliding scale from not at all busy (0) to average (0.5) to extremely busy (1). A main effect of patient type emerged, F(1.65, 133.33)=14.18, p<0.001, η^2_p=0.15. Pairwise comparisons with Bonferroni correction revealed that providers reported the ED to be busier during angry encounters than either during positive encounters (p=0.001; 95% CI 0.05 to 0.22) or mental health encounters (p<0.001; 95% CI 0.08 to 0.19), and the latter two did not differ (p=0.99). In addition to these effects, nurses overall reported the ED to be busier when seeing all types of patients compared to physicians (0.70 vs 0.59; p<0.001). No higher-order interactions involving both encounter type and participant profession (physician vs nurse) emerged, F(1.65, 133.33)<1.

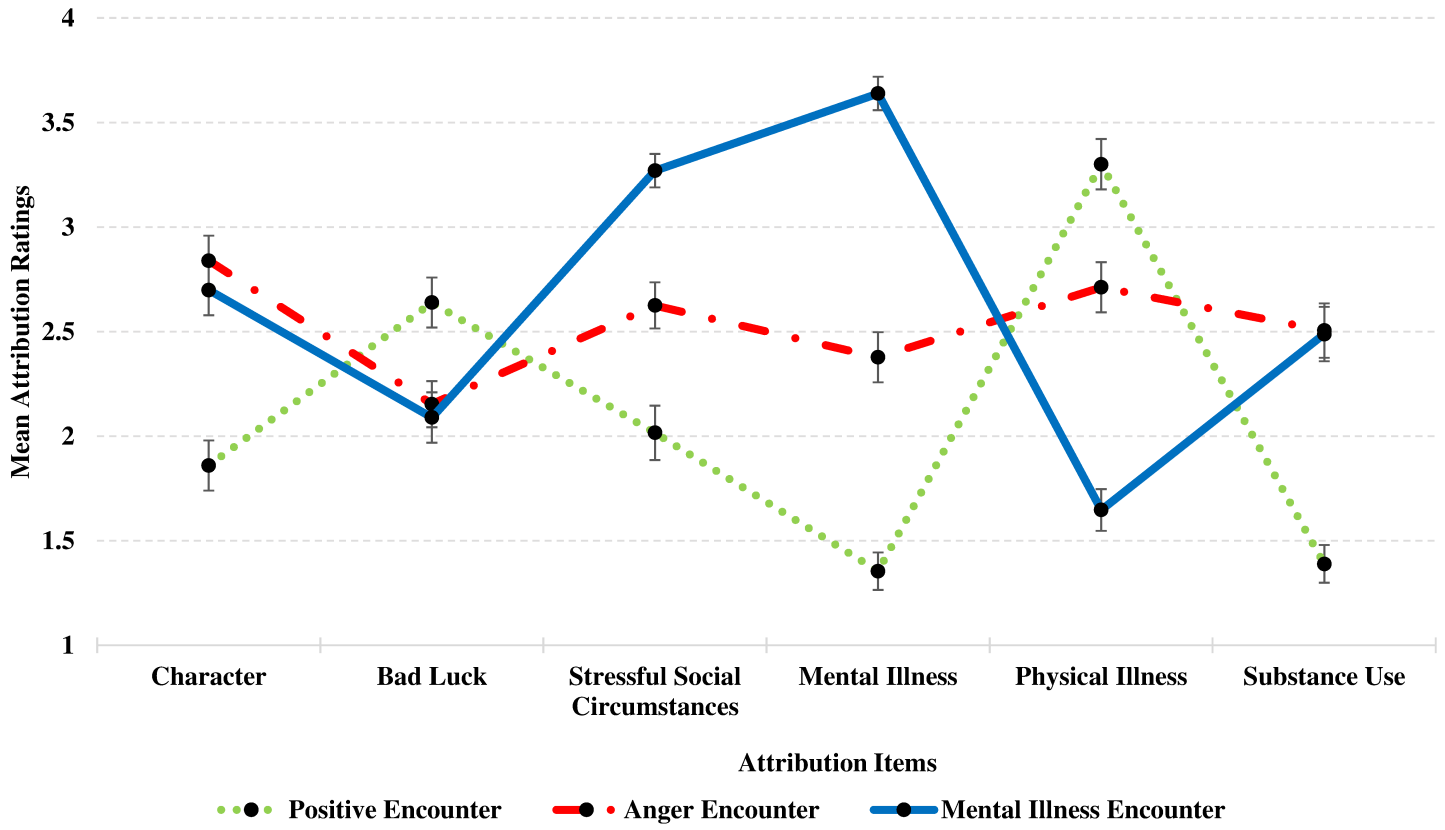
Exploratory Analyses: Perceived Causes (Attributions) for Patient Presentations

We explored the possibility that providers' causal attributions for patient presentations would vary by encounter type. For each encounter they described, participants were asked, "In your opinion, how likely is it that this patient's presentation was due to ____?" Items included: their character, bad luck, stressful circumstances in their life, mental illness, physical illness, and substance use. Participants choose one of the following options for each cause: very unlikely (1), somewhat unlikely (2), somewhat likely (3), and very likely (4). Participants' responses to these questions were subjected to a three-way mixed multivariate analyses of variance (MANOVA) with patient encounter as a within-subjects factor, and encounter order and participant profession (physician vs nurse) as between-subjects factors. This analysis revealed a main effect of encounter type, $F(12, 334)=27.32$, $p<0.001$, $\eta^2_p=0.50$, which was independent of participant profession, encounter order, and their interaction, $F(12, 334)=1.11$, $p<0.35$. As shown in Figure S2, compared to positive encounters, in angry and mental health encounters, providers made greater attributions to character and to stressful circumstances, and lower attributions to bad luck (all p's$\leq$0.002). In positive encounters, attributions were almost always to physical illness; whereas in angry and mental health encounters, attributions were more likely to be made to character and substance use, and less likely to bad luck (and attributions in these later encounters did not differ, all p's$\geq$0.94). However, in angry and mental health encounters, attributions differed in terms of stressful social circumstances ($p<0.001$; 95% CI 0.31 to 0.98; Cohen's d=0.70), physical illness ($p<0.001$; 95% CI -1.41 to -0.72; Cohen's d=-1.79) and mental illness ($p<0.001$; 95% CI 0.93 to 1.59; Cohen's d=1.36).

We also tested how likely a patient's presentation in each encounter type was attributed to each of the six causes. To do this we compared the mean attribution ratings (for every cause

in each encounter type) to 2, which corresponds to unlikely on the rating scale. If a mean is significantly less than or equal to 2, it indicates that a patient's presentation was unlikely to be attributed to that particular cause; however, if it is above 2, it indicates the patient's presentation was likely to be attributed to that cause. The results, summarized in Table S5, reveal that patients' presentations in positive encounters were likely to be attributed to bad luck and physical illness and unlikely to be attributed to character, stressful circumstances, mental illness, and substance use. In contrast, patients' presentations in angry and mental health encounters were likely to be attributed to their character, stressful circumstances, mental illness, and substance use and they were unlikely to be attributed to bad luck. Finally, presentations in angry encounters were likely to be attributed to physical illness, whereas those in mental health encounters were not.

Figure S2. Providers' Perceptions of the Causes (Attributions) for Patient Presentations by Encounter Type



Note: Response options included very unlikely [1], somewhat unlikely [2], somewhat likely [3], very likely [4]. Thus, any rating at 2 or below suggests it is unlikely that this cause was endorsed. Error bars represent plus/minus one standard error.

Table S5. Providers' Perceptions of whether Specific Causes (Attributions) for Patient Presentations Are Likely versus Unlikely (by Encounter Type)

	Positive Encounter		Angry Encounter		Mental Health Encounter	
Attributions[1]	Mean	Diff from 2[2]	Mean	Diff from 2[2]	Mean	Diff from 2[2]
Character	1.84	p=0.17	2.86	p<0.001	2.7	p<0.001
Bad Luck	2.62	p<0.001	2.17	p=0.13	2.09	p=0.43
Stress	2.00	p=0.99	2.66	p<0.001	3.29	p<0.001
Mental	1.34	p<0.001	2.39	p=0.001	3.64	p<0.001
Physical	3.33	p<0.001	2.71	p<0.001	1.64	p<0.001
Sub Use	1.38	p<0.001	2.47	p<0.001	2.52	p<0.001

[1] Stress = Stressful Social Circumstances; Mental = Mental Illness; Physical = Physical Illness; Sub Use = Substance Use

[2] Diff from 2 = Different from 2 on the Scale, where 2 corresponds to "unlikely."

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