One Moment at a Time: Mindfulness, Meditation, and Hope for Addiction Treatment

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Editor's Note: This op-ed was written by Zev Schuman-Olivier, MD, the Executive Director and Research Director of the Cambridge Health Alliance Center for Mindfulness and Compassion as part of our Special Series on Mindfulness and Addiction.



Near the end of my third year of medical school, I attended a silent mindfulness meditation (MM) retreat. On the 10th day, when the silence was broken, I walked outside appreciating the quiet, warm day. I saw a man with a calm face sitting under a tree. I decided to join him on the grass, feeling there was something I could learn from him. As I sat down next to him in the shade of the tree, I was surprised by the bumpy firmness of the ground and the giant maple's gnarled roots which were buried just below the surface. As we got to know each other, he shared his surprising inner journey and in doing so opened my mind to the transformative power of meditation practice. His path with mindfulness took him from his old existence, one solely focused on using crack cocaine and surviving the underworld of the big city, to his present experience of serenity and fulfillment sitting under the big maple. He spoke about his past attempts to try the twelve steps, and how he had found mindfulness meditation as an alternative. He called the mindful path – "my AA." The

inspiration I took from his experience moved me deeply.

From his telling, I understood that the mindfulness meditation approach engaged several active ingredients, which had similar functions to potent elements of the twelve-step approach of Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). For example, both include a requirement that one recognize addiction's power and the suffering and loss of control that has come from it [i.e., mindfulness meditation causes us to recognize the nature of conditioned avoidance and craving and their role in causing suffering (MM), which is similar to 'We admitted we were powerless over alcohol–that our lives had become unmanageable' (AA)]. Both approaches encourage the necessity of acceptance and letting go of wanting and selfishness in the face of a fundamental existential truth. In other words, the need to accept each moment's experience and the fundamental inevitability of change (MM) plays a similar function as the 'need to turn over our will and our lives to the care of God' (AA). Both approaches provide a clear path of hope by providing a vehicle for daily commitment to self-directed action [i.e., daily mindfulness practice requires a regular commitment that is similar to showing up to a meeting]. Finally, both approaches provide an opportunity for a safe community with like-minded people and guides built around the commitment to the self-directed action [i.e., mindfulness community groups and meditation teachers encouraging practice have similarities to 'meetings' and 'fellowship' and a 'sponsor' who can encourage commitment]. Being in a supportive community where alcohol and drugs are not being used is a key contributor to the success of 12-step programs [1]. While modern mindfulness is an explicitly secular endeavor, it seems to engage similar active mechanisms for behavior change and personal transformation as AA.

This meeting under the maple tree provoked me to think more deeply the applicability of mindfulness for substance use disorders. It was the first time I had ever really talked in depth with someone in long-term recovery. His wisdom and serenity stood in vivid contrast to the devastating impacts I had witnessed during my third year of medical school of cocaine and heroin use on my patients' lives. Earlier during that meditation retreat, I had been burdened by memories of a patient with whom I had made a strong emotional connection, who had fled the hospital just hours after life-saving back surgery in order to return to the needle and his makeshift camp under the interstate bridge; my senior resident had not given him his requested higher dose of morphine for pain control like I had been advocating, saying it was just "drug-seeking". It was painful to see opportunities

for healing and recovery slip away. I also found it difficult to imagine the person I had worked with meditating on a mindfulness retreat when he wouldn't even stay in his hospital bed after surgery. I wanted to understand further whether mindfulness could have an impact on addiction treatment and recovery.

I signed up for an addiction medicine elective soon after that meeting. As it turned out, a sublingual combination of buprenorphine and naloxone (Suboxone) had just been approved for outpatient prescribing. People were starting to pour into the addiction treatment program trying to get on this life-saving treatment. After feeling so powerless during my hospital rotations, it was amazing to be in a position to help people break the cycle. Unfortunately, our patients who were prescribed buprenorphine did not feel accepted by some members of the local 12-step community, which was not uncommon at the time [2], even though the 3rd tradition is "The only requirement for membership is a desire to stop using (NA)." Our patients knew that buprenorphine was not recovery in itself and they wanted support from AA/NA to be able to free themselves from addictive habits, anger and resentment, and to be able to live a happier life. Once again people seeking help; once again people finding the closed door of stigma. It was at this point that I set out to research whether mindfulness could be effectively used as adjunctive component with medication-assisted treatment (buprenorphine, methadone) for people with opioid-use disorders.

My first research project was to study a mindfulness-oriented intervention (Spiritual Self Schema [3-S] Development Program) underway at Yale that integrated mindfulness, meditation and schema therapy. I studied the effects of the intervention on impulsivity and HIV risk behaviors among methadone-maintained cocaine users. Our study team led by Arthur Margolin and S. Kelly Avants demonstrated in a NIDA-funded RCT that HIV risk behaviors, e.g., needle sharing and unprotected sex, were significantly reduced after 3-S [3]. We also reported that participants experienced themselves as having higher levels of impulse control [4]. Contrary to the common belief in medicine at the time that substance users would be unwilling or unable to meditate, we found that 100% of participants established a daily mindfulness meditation practice by the end of the program and 64% were practicing more than 30 minutes of breath meditation daily. Participants conveyed that they were able to call on their mindfulness practice during particularly high stress events, helping them stay calm and avoiding life-altering outcomes such as potential arrests, relationship loss, or loss

of children to social services [5].



I started a four year psychiatry residency at Cambridge Health Alliance in 2005. I was trained in Dialectic Behavioral Therapy (DBT), which introduced informal mindfulness practices and was being adapted for substance use [6]. I received supervision by Jack Engler and Chris Germer, who was writing his book on the important role of self-compassion [7, 8]. During that time, research on various mindfulness interventions for addiction treatment increased [9]. Sarah Bowen, Katie Witkiewitz, and Alan Marlatt and published a study of mindfulness meditation among the incarcerated reporting that meditators had less drug and alcohol use after release [10]. They then created Mindfulness-Based Relapse Prevention (MBRP), which has demonstrated efficacy for relapse prevention [11] compared to relapse prevention alone and standard care. The study found that MBRP helped people disconnect negative affect from craving (i.e. unlinking feeling sad from wanting to use) [12] and increased acceptance and non-judgement which reduced craving [13]. Judson Brewer developed Mindfulness Training for Smokers (MTS) [14]. The trial results inspired the creation of the Craving to Quit smartphone application [15]. Eric Garland showed that Mindfulness-Oriented Recovery Enhancement (MORE) led to reductions in opioid misuse among people with chronic pain, reductions in cue-reactivity, and potentially enhanced reward responsiveness [16]. During this time, I continued to research the impact of mindfulness of various aspects of self-regulation. The additional research and

mechanistic understanding continues [17].

After psychiatry training and an addiction psychiatry fellowship I entered clinical practice and became interested in exploring the limits of who could benefit from mindfulness meditation. As medical director for a dual diagnosis assertive community treatment team, we started a mindfulness group rotating through modules from the MBRP, MORE, MTS, DBT, and 3-S curricula each year. Participants were generally young adults who had severe mental illness (e.g., psychotic disorder, bipolar disorder, OCD, or severe depression) AND an ongoing severe substance use disorder. Most people appreciated the group and several people with schizophrenia/schizoaffective/bipolar disorders reduced their medication polypharmacy substantially by using mindfulness skills to cope instead of additional medications [18]. Working with people experiencing severe psychiatric symptoms and, in many cases, ongoing substance use really helped me understand that nearly anyone can meditate if they have some curiosity and willingness, the right kinds of ongoing support, the proper expectations about how much meditation is needed to experience change, and thoughtful instruction from an experienced meditator teacher. We worked to integrate mindfulness, cognitive-behavioral therapy (CBT), twelve-step facilitation, and motivational interviewing, finding they supported each other well. I also came to recognize the essential need to adapt protocols and use different mindfulness teaching techniques for various cultures [19], and for certain psychiatric symptoms [20, 21] or clinical situations. While a multitude of adaptations could be considered, a few important examples include such as history of trauma, different levels of motivation and insight about their substance use, and the relationship of mindfulness and medication.

When teaching mindfulness to people with a history of trauma, for example, caution may be needed [22]. The severity of substance use disorder is strongly associated with adverse childhood experiences, neglect and abuse [23]. In my experience, people with a history of severe relational or sexual trauma can benefit from mindfulness meditation, but often require thoughtful attention to the context and process of the teaching. First, it is important for the teacher to recognize that the conditioned avoidance of both somatic experiences and trauma-related thoughts/cues/memories could be present for any participant. Shame is a common part of post-traumatic stress disorder, and can be particularly painful and hard to work with mindfully. Self-compassion, which is the capacity to be kind to ourselves when we are suffering [24], can help provide a mindfulness-consistent

path for staying with the moment and still caring for ourselves when feelings shame or confronting intensely painful experience. Second, being authentic and aware of the power differential between teacher and participant is essential. Participants with sexual or relational traumas can be intensely sensitive to power differentials during mindfulness interventions. They may go along with it feeling they have to because they feel it is necessary to please the teacher only to later refuse to ever go through that again. Alternatively, they may refuse to participate outright from the beginning if the power differential is too strong. Finally, people need to understand they are in control at every moment. Without feeling safe, it is hard to be still. We remind people multiple times during practices that they can do whatever is needed to take care of themselves during the time. Our own self-judgment can be strongest, so I often say "with mindfulness there is no way to do it wrong as long as you are being kind to yourself… each moment is another opportunity to kindly, gently, but firmly, return awareness to [the breathe]." Some people suggest that it is important to avoid the laying down body scan or other postures during groups, yet for many people this still remains helpful. It is important to remember that any object of present moment awareness could be triggering past traumas for some people. During a training I was leading, I was actually triggered by a trainee who was leading me in mindfully holding a standing squat pose during a mindfulness group, because as a teenager I had been forced to stand for several hours through the night by a sadistic camp counselor. This underscored to me and our training group just how important it is to understand that anyone can have old traumas stored in the body and mind. Therefore, it is important for patients to understand that at every moment they are in control, that they can move if they would like, and that it is skillful and wise to do what they think is best to take care of themselves if needed. This is essential in bringing mindfulness into addiction treatment.

Another area to consider in integrating mindfulness into addition recovery is treatment matching based on a patient's motivation and insight. We conducted a pilot study of 17 heroin users who entered buprenorphine treatment. Our expectation was that people would do better if they were more mindful. While that hypothesis did not pan out, we were surprised to find a conflicting result that a higher baseline tendency for non-judgment of experience predicted drug use in early addiction education/relapse prevention treatment [25]. At fits it was quite surprised, but then seems like common sense. Basically, the study results suggested that people with opioid use disorder who don't experience their craving

as bad or their thoughts about using as problematic or shameful generally didn't do as well in standard addiction treatment. This made me wonder if mindfulness training would have a different result with people who have less capacity to judge themselves about their addiction. Conducting a secondary analysis of Jud Brewer's smoking trial comparing MTS and CBT, we found that baseline non-judgment moderated the effect of treatment, benefitting those in the mindfulness group, but not providing any benefit in CBT [26]. These results suggested people, who were not very judgmental or self-critical in early addiction recovery and may actually struggle in standard treatment, could potentially benefit from a mindfulness approach instead. This is an area of research needing further replication.

Lastly, a crucial clinical issue is the intersection of mindfulness and medication. The media often presents meditation as an alternative to medication; however, a middle path approach is often needed [27]. Patients commonly report that they can't settle their minds during meditation because of the intensity of their symptoms of withdrawal, anxiety, mood, or psychosis disorders. Only once these calm down with medication can the person begin to build the skills and engage in the practice needed to get the therapeutic neuroplasticity that comes with mindfulness meditation. For some people at times when they have lost mental balance, the most mindful approach may be to accept the need for medication until the brain or environment changes and they can regain their internal balance. We generally consider buprenorphine to be a maintenance medication and encourage people to stay on it indefinitely based on studies showing poor outcomes after discontinuation [28]. Yet, we find that many people want to get off of their medication, so we started a Mindfulness-Based Buprenorphine Reduction Program at Cambridge Health Alliance Outpatient Addiction Services. Mindfulness helps people manage many of the symptoms that emerge when people come off buprenorphine, such as anxiety, depression, stress, pain, insomnia, and difficulty dealing with negative events. We have witnessed several patients come to the realization that the desire to reduce their medication is driven by self-stigma and shame around their history of addiction and their wanting it to be over and behind them. In my experience to date, people generally are not able to actually reduce their medication successfully, until they fully accept their need for the medication in this present moment and learn to have a self-compassionate response instead of self-critical response to their self-identification with their addiction history. We tell our group that either

medication reduction or reduction of their suffering around their need for medication can be equally successful outcomes of the program.



In 2014, we formed the Cambridge Health Alliance Center for Mindfulness and Compassion (CMC) with the mission to enhance the health and well-being of CHA and our local community by integrating mindfulness and compassion into healthcare. CMC focuses on innovation in areas of patient care, professional education, scientific research, workplace well-being, and programs for our diverse communities. CMC currently has several research grants examining the impact of mindfulness on pain, self-regulation, and health behavior change, investigating mechanisms related to attention, emotion regulation, interoception [29], and self-compassion [30]. Grounded in the value that mindfulness and compassion are innate human capacities that support health and well-being, CMC aims to foster an inclusive, caring and multi-cultural community that allows individuals to thrive.

As the research on mindfulness and addiction continues to grow, we must remember that most people healing from addiction need supportive and welcoming communities in order to be able to maintain sobriety, continue to grow, and to keep moving forward on their recovery path. We hope that CMC can be a welcoming center for people in recovery who seek to learn more about mindfulness. Much has changed in the past decade and I am continually appreciative of the openness that local twelve-step and self-help communities now provide to our patients who are prescribed buprenorphine. We hope CMC can be a collaborative center where local twelve-step and self-help communities who are considering integrating mindfulness into their groups and programs can turn for support and guidance. Learning to work with craving, habitual avoidance, and other addictive behaviors is a part of our common human experience, and we all have the potential for transformation within us. This is something I first learned fifteen years ago and continue to witness among my patients, my friends, my colleagues and others who participate in the CMC community today.

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References:

1. Kelly, J.F., et al., *The role of Alcoholics Anonymous in mobilizing adaptive social network changes: A prospective lagged mediational analysis.* Drug & Alcohol Dependence, 2011. **114**(2): p. 119-126.
2. Monico, L.B., et al., *Buprenorphine Treatment and 12-step Meeting Attendance: Conflicts, Compatibilities, and Patient Outcomes.* Journal of Substance Abuse Treatment, 2015. **57**: p. 89-95.
3. Margolin, A., et al., *A controlled study of a spirituality-focused intervention for increasing motivation for HIV prevention among drug users.* AIDS Educ Prev, 2006. **18**(4): p. 311-22.
4. Margolin, A., et al., *A preliminary study of spiritual self-schema (3-S(+)) therapy for reducing impulsivity in HIV-positive drug users.* J Clin Psychol, 2007. **63**(10): p. 979-99.
5. Beitel, M., et al., *Reflections by inner-city drug users on a Buddhist-based spirituality-focused therapy: a qualitative study.* Am J Orthopsychiatry, 2007. **77**(1): p. 1-9.
6. Dimeff, L.A. and M.M. Linehan, *Dialectical behavior therapy for substance abusers.* Addict Sci Clin Pract, 2008. **4**(2): p. 39-47.
7. Germer, C.K. and K.D. Neff, *Self-compassion in clinical practice.* J Clin Psychol, 2013. **69**(8): p. 856-67.
8. Neff, K.D. and C.K. Germer, *A pilot study and randomized controlled trial of the mindful self-compassion program.* J Clin Psychol, 2013. **69**(1): p. 28-44.
9. Zgierska, A., et al., *Mindfulness meditation for substance use disorders: a systematic review.* Subst Abus, 2009. **30**(4): p. 266-94.

10. Bowen, S., et al., *Mindfulness meditation and substance use in an incarcerated population.* Psychol Addict Behav, 2006. **20**(3): p. 343-7.
11. Bowen, S., et al., *Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: a randomized clinical trial.* JAMA Psychiatry, 2014. **71**(5): p. 547-56.
12. Witkiewitz, K. and S. Bowen, *Depression, craving, and substance use following a randomized trial of mindfulness-based relapse prevention.* J Consult Clin Psychol, 2010. **78**(3): p. 362-74.
13. Witkiewitz, K., et al., *Mindfulness-based relapse prevention for substance craving.* Addict Behav, 2013. **38**(2): p. 1563-71.
14. Brewer, J.A., et al., *Mindfulness training for smoking cessation: results from a randomized controlled trial.* Drug Alcohol Depend, 2011. **119**(1-2): p. 72-80.
15. Brewer, J.A., H.M. Elwafi, and J.H. Davis, *Craving to quit: psychological models and neurobiological mechanisms of mindfulness training as treatment for addictions.* Psychol Addict Behav, 2013. **27**(2): p. 366-79.
16. Garland, E.L., B. Froeliger, and M.O. Howard, *Effects of Mindfulness-Oriented Recovery Enhancement on reward responsiveness and opioid cue-reactivity.* Psychopharmacology (Berl), 2014. **231**(16): p. 3229-38.
17. Li, W., et al., *Mindfulness treatment for substance misuse: A systematic review and meta-analysis.* Journal of Substance Abuse Treatment. **75**: p. 62-96.
18. Schuman-Olivier, Z., D.L. Noordsy, and M.F. Brunette, *Strategies for Reducing Antipsychotic Polypharmacy.* J Dual Diagn, 2013. **9**(2): p. 208-218.
19. Amaro, H., et al., *Feasibility, acceptability, and preliminary outcomes of a mindfulness-based relapse prevention intervention for culturally-diverse, low-income women in substance use disorder treatment.* Subst Use Misuse, 2014. **49**(5): p. 547-59.
20. Chadwick, P., et al., *Mindfulness groups for distressing voices and paranoia: a replication and randomized feasibility trial.* Behav Cogn Psychother, 2009. **37**(4): p. 403-12.
21. Deckersbach, T., et al., *Mindfulness-based cognitive therapy for nonremitted patients with bipolar disorder.* CNS Neurosci Ther, 2012. **18**(2): p. 133-41.
22. Follette, V., K.M. Palm, and A.N. Pearson, *Mindfulness and trauma:*

implications for treatment. Journal of Rational-Emotive and Cognitive-Behavior Therapy, 2006. **24**(1): p. 45-61.
23. Dube, S.R., et al., *Childhood Abuse, Neglect, and Household Dysfunction and the Risk of Illicit Drug Use: The Adverse Childhood Experiences Study.* Pediatrics, 2003. **111**(3): p. 564-572.
24. Neff, K.D., *The Development and Validation of a Scale to Measure Self-Compassion.* Self and Identity, 2003. **2**(3): p. 223-250.
25. Schuman-Olivier, Z., et al., *Effects of Trait Mindfulness During Buprenorphine Treatment for Heroin Dependence: A Pilot Study [Poster Abstract from AAAP 21st Annual Meeting].* The American Journal on Addictions, 2011. **20**: p. 386.
26. Schuman-Olivier, Z., et al., *Finding the right match: mindfulness training may potentiate the therapeutic effect of nonjudgment of inner experience on smoking cessation.* Subst Use Misuse, 2014. **49**(5): p. 586-94.
27. Lovas, D.A., J. Lutz, and Z. Schuman-Olivier, *Meditation and medication—what about a middle path?* JAMA Psychiatry, 2016. **73**(12): p. 1294-1295.
28. Weiss, R.D., et al., *Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence: a 2-phase randomized controlled trial.* Arch Gen Psychiatry, 2011. **68**(12): p. 1238-46.
29. Craig, A.D., *Interoception: the sense of the physiological condition of the body.* Curr Opin Neurobiol, 2003. **13**(4): p. 500-5.
30. Hölzel, B.K., et al., *How Does Mindfulness Meditation Work? Proposing Mechanisms of Action From a Conceptual and Neural Perspective.* Perspectives on Psychological Science, 2011. **6**(6): p. 537-559.