

Environmental Cues and Relapse: An Old Idea That Is New for Reentry of Recovering Anesthesia Care Professionals

To the Editor: The recent editorial by Oreskovich and Caldeiro¹ points out the dangers posed to anesthesiologists who attempt to return to the workplace after treatment for drug addiction. As a member of the American Association of Nurse Anesthetists (AANA) Peer Assistance Advisors Committee, I am well aware that the dangers of addiction and relapse extend not only to anesthesiologists but also to all anesthesia care professionals (ACPs) who have access to potent sedative, analgesic, and anesthetic drugs used daily in their clinical practices. (These are the same compounds most commonly associated with addiction and death in the fraction of ACPs who divert and abuse drugs.) Although a body of literature is developing that identifies the risks of addiction and relapse to physician ACPs, the risks to other ACPs remain poorly defined. However, the collective experience of the AANA Peer Assistance Advisors makes it clear that the risk of death from relapse is similar to, if not greater than, that posed to physicians, yet we believe falls well short of the “nearly 100% relapse rate” mentioned by Berge et al.²

Oreskovich and Caldeiro¹ nicely summarize the current literature regarding the treatment and aftercare programs that appear to provide the best chance of long-term recovery and safe return to the workplace for physician ACPs.² Two topics of discussion missing from much of the literature that these authors use to support their stance concern the role that environmental cues play in relapse and the optimal time spent away from the operating room (OR) environment in early recovery. A survey that I conducted as a part of my PhD coursework (unpublished data) determined that environmental triggering cues found in the OR may be olfactory (eg, alcohol preparatory pads, fumes from electrocautery), tactile (eg, handling vials of opiates, needles, and tourniquets), or situational (eg, seeing a syringe with leftover fentanyl). Although such triggering cues have been linked with relapse to drug abuse,³⁻⁶ the role of cues in relapse in health care professionals or in ACPs specifically has not been well documented.

Cue exposure therapy may have a useful role in extinguishing responses to cues to relapse,^{3,7-13} but current literature might have limited generalizability for the ACP. For example, a person recovering from alcoholism (unless employed as a bartender or waitstaff) can legitimately avoid going to bars, pubs, or other places heavily laden with cues for relapse to alcohol consumption. A recovering ACP cannot, on reentry, avoid the OR and all its associated cues. Not all triggering cues are obvious: Several recovering Certified Registered Nurse Anesthetists (CRNAs) reported (in my aforementioned survey) that cues related to the “bathroom” (the smell of the bathroom cleaner, being offered a bathroom break) elicited a strong physiologic and psychological reactivity because the bathroom is where many addicted ACPs self-medicate in isolation.

The recovering ACP requires time away from the OR environment (1 year has been suggested)¹⁴ to build a solid foundation of recovery. This time may be critical for allowing the power of cues to extinguish by a process of “reprogramming” the addicted ACP’s hippocampus and amygdala.^{15,16} The AANA Peer Assistance Advisors have undeniably seen over the years that returning to work in the OR environment too soon leads to a dramatic increase in the risk of relapse. The time away from the OR practice of anesthesia need not be entirely a gap in training or practice for the ACP. Indeed, Bryson and Levine¹⁷ advocate the use of an anesthesia simulator for 12 months before reentry. Although their study of 5 recovering opiate-addicted anesthesia residents at a large academic teaching hospital did not address cues, it did emphasize the many benefits of having reentrants use the anesthesia simulator to maintain their clinical skill level while actively teaching medical and other students. This work schedule also facilitated attendance at 12-step and other support group meetings. Of the 5 residents, 3 successfully completed their residencies and their 5-year monitoring contract, subsequently taking positions as attending anesthesiologists. Although the cost of simulator time is considerable, it would almost certainly be less than that of wasting the years of education and training that have been invested in becoming an anesthesiologist. Because much of the expense of running a simulator is related to personnel, some of that can be offset by offering the recovering ACP meaningful employment at the simulation center during a period when he or she is not eligible for an OR position. The OR simulator might prove to be a safe “virtual reality” for the reentering ACP to identify problematic cues and perhaps to extinguish the power of such cues by gradual reexposure in a more controlled setting than that represented by the OR environment.

Oreskovich and Caldeiro are to be applauded for their effort to further the standardization of what constitutes sufficient treatment and monitored aftercare. Hopefully, this will facilitate a safe reentry for the recovering ACP, without a prohibitive risk of relapse and death. Better understanding of the potent environmental cues to relapse and tailoring efforts to modify the response to these cues during the time before return to the workplace may be extremely important in ensuring sustained recovery from addiction and restoring professional productivity (and personal independence) in these individuals who have high value to society and the medical community.

Heather Wilson, CRNA, MS
Los Angeles County Medical Center
at the University of Southern California
Los Angeles

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In reply: We appreciate the excellent observations and suggestions made by Ms Wilson in response to our editorial.

As a member of the American Association of Nurse Anesthetists (AANA) Peer Assistance Advisors Committee, Wilson emphasizes that the occupational risk of substance abuse and dependency more commonly discussed in relationship to anesthesiologists also extends to nurse anesthetists and other anesthesia care professionals (ACPs) who have access to potent sedative, analgesic, and anesthetic drugs. Not only do we concur with that observation but we also believe it extends to other operating room (OR) personnel who do not provide anesthesia services but may have access to unused drugs. We have observed a wide variation in the quality of accountability in hospital policies for controlled substances in the OR and also have seen instances of diversion by OR nurses, surgical residents, and medical students.

Ms Wilson shares the results of a survey she conducted as a part of her PhD course work (unpublished), which demonstrated that environmental OR cues can involve many different senses: "olfactory (eg, alcohol preparatory pads, fumes from electrocautery), tactile (eg, handling vials of opiates, needles, and tourniquets), or situational (eg, seeing a syringe with left-over fentanyl)." Wilson suggests that OR anesthesia simulation

laboratories can be used as a site for cue exposure therapy¹⁻³ to desensitize the ACPs before allowing them to return to the OR after treatment for their chemical dependency.

In fact, we are incorporating this approach into our "back-to-work" evaluations and recommendations for anesthesiologists who have completed treatment. One of my colleagues (Paul Earley, MD, unpublished data, September 2009) has proposed that addiction memory invokes the same neural circuits as the abnormal memory experiences associated with posttraumatic stress disorder and that some of the treatment modalities for this disorder can be equally effective in preventing cue-induced relapse. In addition to the cue exposure therapy referenced by Wilson,^{4,5} Earley and I suggest that both eye movement desensitization and reprocessing therapy and meditation may have useful roles in the extinction of cue-induced craving caused by smells, sights, and touches in the OR anesthesia simulation laboratories.

In most circumstances, the anesthesiology staff members, residents, and fellows that we monitor after treatment for chemical dependency do not return immediately to the OR. Several issues are considered in their return to work evaluation and recommendations, including, but not limited to, the following: drug use history, 12-step progression, sponsor, recovery integration, duration of proven abstinence, relapse history, tobacco and nicotine use, behavioral addictions, genetic predilection, gratitude vs resentment and blame, use of opioid antagonists, quality of multimodal monitoring, advanced drug screening, high-risk co-occurring medical disorders, co-occurring mood disorders or other *Diagnostic and Statistical Manual of Mental Disorders Axis I and Axis II disorders*,⁶ risk-taking behavior, history of boundary violations, family history and family stability, quality of psychosocial support systems, quality of diversion-prevention protocols, attitude of the work environment toward the recovering anesthesiologist, and the quantity and quality of cue-induced craving and euphoric recall.

On the basis of the recommendations by Wilson, we propose that the same vigorous approach be applied to all ACPs.

Michael R. Oreskovich, MD
Ryan M. Caldeiro, MD
University of Washington
Seattle

1. Childress AR, Hole AV, Ehrman RN, Robbins SJ, McLellan AT, O'Brien CP. Cue reactivity and cue reactivity interventions in drug dependence. *NIDA Res Monogr.* 1993;137:73-95.

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Confrontational Approach Has No Role in Addressing Physician Addiction

To the Editor: The article by Berge et al¹ entitled “Chemical Dependency and the Physician” contained little new information and several inaccuracies. First, contrary to the views of the authors who state “the problem of physician addiction has largely escaped the public’s attention,” the public is fascinated with this subject. CNN recently reported on the closing of the California Diversion Program, *US News and World Report* published a survey regarding “Would you want to know if your doctor is addicted?” and during the past 20 years there have been repeated news upheavals and hysteria regarding this issue. The fascination by the public likely represents the incongruity of the mainstream view of addiction as a moral failure that affects lower class individuals and the image of the physician.

Second, the section on intervention is misinformed. The authors suggest using a “confrontational approach, [wherein] the addict is faced by a roomful of family members, coworkers, supervisors, etc, who offer specific evidence of the addictive behavior...” In 28 years of working in the arena of physician health, I have performed thousands of interventions, and this type of “Johnson model” intervention is ill-advised, risky, more difficult to arrange, and less effective. In contrast, the most common model of intervention performed by Physician Health Programs (PHPs) is a nonconfrontational “professional intervention” model, in which evaluation is “strongly advised because concerns have arisen” without pressing the issue of whether or not there is a bona fide problem. Immediate discontinuation of work is recommended to avoid liability issues. If the physician considers refusing, he or she is gently advised that the alternative to the clinical (and usually confidential) approach of the PHPs is to refer the matter to the regulatory board. Prompt entry into the “safe harbor” of evaluation can be accomplished in the vast majority of cases without confrontation, thus avoiding the stress and attendant risk associated with confrontation. We frequently handle such interventions by telephone. In our series of 328 such interventions by telephone, there have been no differences in successful entry into evaluation and no deaths, compared with in-person intervention.

Finally, the authors refer to the oft-repeated and likely faulty data published almost 2 decades ago by Menk et al,² before advances gained by PHPs, in which 16% of relapses were associated with death. Articles that document highly successful treatment and long-term care of anesthesiologists were not mentioned.³⁻⁵

The article by Berge et al is well written but contains substantial misinformation. Involving a medical director of a PHP, an ultraspecialized area of medicine, who is on the front line of intervention and management of addicted physicians for future reviews would be optimal.

Gregory E. Skipper, MD
Alabama Physician Health Program
Medical Association of the State of Alabama
Montgomery

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In reply: My colleagues and I thank Ms Wilson and Dr Skipper for their correspondence, along with the many others who contacted us outside of the pages of *Mayo Clinic Proceedings* to express their interest in our article on physician addiction. For us, these interactions have highlighted the many unknowns and complexities that arise when dealing with health care professionals who abuse drugs. Specifically, contemporary prevention and treatment of addiction in these individuals are clearly hindered by an inadequate understanding of the following: (1) the magnitude of the problem; (2) optimal detection of substance abusers; (3) factors that initially contribute to drug diversion and abuse; (4) treatment, aftercare, and monitoring factors needed for optimal long-term maintenance of sobriety; and (5) the best way to institutionalize such optimal programs to supplant inferior programs.

Consistent with these views, Wilson highlights the potential importance of triggers and cues that develop during addictive use of a substance. These, in turn, contribute to the perpetuation of abuse and may harm successful return to work. Her unpublished research has determined that visual, tactile, and olfactory cues (as generated by such mundane and unavoidable tasks as bathroom use or putting on gloves) may provide potent triggers to relapse. Such observations emphasize the enormity of the task the addict encounters in premature attempts to return to the workplace, yet remain sober. We applaud Wilson’s efforts to explore reliable methods that might help extinguish, over time, such potent cues. It appears likely that an overly rapid return to the work environment where drug diversion and abuse occurred, before such cues can be extinguished, almost certainly contributes to the high relapse rate seen with addicted health care professionals.

In contrast to the complexities and nuance inherent in Wilson’s correspondence, we were surprised by some of the statements by Skipper. He took exception to our comment that “the problem of physician addiction has largely escaped the public’s attention” by offering a uniquely American perspective of the media coverage this issue has received. In response, we hasten to point out that physician addiction is not unique to the United States. When I spoke on the topic several years ago in New Delhi, India, a television interviewer told me that, to the best of her knowledge, this was the first time the topic had ever been broached publicly in India, a country of more than a billion people. Given that the problem is relatively unknown in one of the most populous countries in the world and

because our article was published in a medical journal with a worldwide audience, we differ with Skipper when he calls our statement an “inaccuracy.”

Furthermore, Skipper says that our section on intervention is “misinformed,” stating that the style of intervention that he prefers and claims to “have performed thousands of” is superior. This appears to simply be his opinion. He offers nothing from the indexed literature to support this contention, and we are unable to identify anything in the indexed literature that would confirm or refute his belief. Additionally, Skipper refers to good outcomes in a series (apparently unpublished data) in which interventions are conducted by telephone. Although such an intervention method might indeed have its place, we think that, in the setting of the acutely intoxicated caregiver who is actively involved in hands-on patient care, such a response would clearly be inappropriate. Such a caregiver must be immediately removed from the patient-care environment.

Finally, Skipper takes exception to our citing the study by Menk et al¹ and for not including several other studies whose results he prefers.²⁻⁴ In fact, we did reference the study by Domino et al,⁴ although we drew a different conclusion than did Skipper, in that we focused on those who failed to remain abstinent while he focused on those who did. In that study, 17 of 22 fentanyl-addicted anesthesiologists relapsed to fentanyl use, with Menk et al¹ having earlier documented that even one relapse can have fatal consequences. These data allow more than one conclusion to be drawn. Failing to have drawn the same conclusion from different parts of the data set does not constitute providing “misinformation” on our part, any more than it does on his.

We agree with Skipper’s statement that the literature identifies established model programs in several states that are achieving better results than were documented by earlier studies such as that of Menk et al.¹ We applaud the recent contribution to the literature by Skipper et al,⁵ which shows that an optimally designed PHP can provide better than average outcomes for those who seek to reenter the workplace. We firmly believe that the most successful rehabilitation

programs (for patient outcomes) need to be replicated and required nationwide. Access to programs that have designs of proven efficacy is especially crucial for anesthesia care professionals (whether physicians, nurse anesthetists, or others) who have previously diverted drugs from the workplace and are now seeking to return to an operating room practice. Currently, there is no uniformity among state’s PHPs that monitor these individuals, nor do all states have such programs. We firmly believe that all anesthesia care professionals should adhere to a uniform program of the highest demonstrated quality of aftercare and monitoring supported by the indexed literature because they all share the same risk of relapse and death.

My colleagues and I applaud Wilson for pursuing a research path that might ultimately result in beneficial changes in treatment and aftercare. Although Skipper’s opinions on some of these matters differ from ours, we hardly think that this constitutes our having provided, as Skipper suggests, “misinformation.” Well-intentioned people can disagree on what conclusions should be drawn from ambiguous literature without such base accusations arising.

Keith H. Berge, MD
Mayo Clinic
Rochester, MN

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