concern that this action will end their career. Rather than disclose the need for help, even after years of successful practice, the individual will choose to remain out there rather than suffer the inevitable consequence of career loss. This has a strong potential for keeping the individual isolated, disease progressing, until he injures a patient or himself and then is discovered. For some individuals career redirection needs to happen and is the right approach, but it shouldn't be applied to everyone any more than the idea that everyone should get a chance to return to the same work environment in the same capacity.

I am also disappointed in the editorial policy of ANESTHESIOLOGY that allowed this editorial to be published without so much as a counterpoint view. For the uneducated and inexperienced in this area this editorial may well be adopted as the standard approach by some departments and treatment centers dealing with these personnel, simply because it appeared as it did in this journal. That would be very unfortunate and a tragedy for some in its own right.

I think this editorial, unlike the article by Bryson and Silverstein,[1] have helped foster the idea that we need a "one size fits all" approach where what we should be doing is to evaluate each case individually, applying data where they it exist (like family history, personal history, length of time using, comorbidities, family and hospital/department support, and environment, among others) and individually making a decision to return to the same work or not, employing appropriate monitoring, aftercare and safeguards for the individual and to protect his or her patients.

I agree that it is time we revisit the issue of addiction among our anesthesia caregiver peers. We should continually revisit the handling of this problem, given the potentially tragic consequences to our peers and their patients. I would propose continuing to develop an individualized care plan, based on the best data and judgment available, for each of them much as we do for all our other patients.

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In Reply:—We thank the authors of the six letters to the editor, as well as the many other concerned readers of ANESTHESIOLOGY who have contacted us personally, in response to our editorial[1] on the abuse of narcotics and other anesthesia-associated drugs by anesthesiologists and related professionals (*e.g.,* Certified Registered Nurse Anesthetists [CRNAs], Student Nurse Anesthetists, and Anesthesia Assistants), hereafter collectively referred to as anesthesia care providers (ACPs). The goal of our editorial was to promote scholarly discussion about the strengths and limitations of the anesthesiology community's current approach to dealing with drug-abusing ACPs. All who have commented seem to agree that the anesthesiology community is faced with a serious problem, but the question remains, "What should we do about it?" Underlying the messages of all who have spoken is a concern about striking a balance between preserving the personal and professional rights of ACPs found abusing these drugs *versus* protecting the health and safety of both the drug abusers and the vulnerable patients in their care. Clearly it is difficult to make optimally informed decisions given the lack of information on the scope of the problem, deficiencies in the current approach, and the outcomes of all drug abusers (including drug-abusing ACPs involved in ideal treatment programs *vs.* those receiving suboptimal monitoring and care).

Despite these limitations, the Federation of State Physician Health Programs (dealing with physician programs) and the National Organization of Alternative Programs (dealing with nursing programs) have labored to provide uniform standards for Health Professionals Programs (HPPs; *i.e.,* the individual state's programs primarily responsible for monitoring and caring for drug-abusing physicians and nurses). Those who have embraced these standards and designed optimal treatment and aftercare programs, and the ACPs who have diligently participated in those programs and returned to meaningful employment, are to be commended for their efforts. Although not all 50 states have such well-functioning HPPs, and although the exemplary programs are not universally successful in treating drug-abusing ACPs and returning them to the workplace, the exemplary programs nevertheless represent an ideal worth striving for. Successful HPPs should be celebrated, replicated, and *required* for addicted ACPs who seek to return to healthcare employment.

Consistent with this view, authors of four of the six letters commenting on our article (*i.e.,* Cohen, Earley, Skipper, and Specht) shared with readers the results reported by several studies conducted by state HPPs showing narcotic and related-drug abuse relapse rates for anesthesiologists no higher than with physicians in other specialties addicted to other drugs (most commonly alcohol). Of note, the authors of the 4 letters reported no deaths among the drug abusers. Skipper *et al.* refer to a subset of 102 addicted anesthesiologists with "slightly better outcomes and no deaths" in a recently published review of United States HPPs,[2] although there are no published data in the reference that would allow us to confirm this conclusion. Thus, we must take this claim at face value, without the ability to critique and criticize the underlying evidence.

Despite the optimistic picture provided by many of the letter authors, anesthesiologists continue to relapse and die, as documented by the literature.[3–5] That no deaths were captured in the data sets provided by the letter authors, and considering the small sample sizes involved in the various letter-writers' comments, we must reflect on a point made by one of the corresponding authors, Dr. Berry, in an 2000 editorial where he and a coauthor introduced an article that had studied cause-specific mortality risk in 40,000 anesthesiologists.[6] According to Berry and Fleisher, even with this large sample, the finding of a 34% excess risk of death of accidental poisoning (*i.e.,* fatal overdose) in male anesthesiologists when compared with the risk of the general population did not reach statistical significance. Berry and Fleisher suggested that an even larger sample or a longer period of follow-up would be necessary to detect small yet statistically significant increases in risk.[7] It is difficult to square this statement based on data from 40,000 anesthesiologists with the willingness of the current letter authors to rely on data sets that consist of 32,[8] 35,[9] 33,[10] and 102[2] presumably highly selected anesthesiologists to assert the relative safety of returning addicted anesthesiologists to the practice of clinical anesthesia. Skipper acknowledges the weakness of these data in a recent 2008 paper he coauthored concerning the effectiveness of HPPs, stating, "It is not possible from the evidence here to prove whether this form of support and monitoring for physicians with substance use disorders is appropriate, too harsh, or too permissive. Any episode of substance use in the context of patient care has the potential for considerable harm."[2] That an ACP who has suffered a relapse will almost certainly be caring for many patients between relapse and intervention is emphasized by Torri.

Others who contacted us independently of the correspondence section of ANESTHESIOLOGY (and, for readily apparent reasons, did not want to publicly share their information because of the personal and professional consequences of doing so) emphasized the negative aspects of our current approach to dealing with drug-abusing ACPs. Some described to us their experiences in dealing with personality disorders, dishonesty, and uncollegial behavior that accompanied drug-abusing ACPs and their (and others') efforts to cover up the abuse. Clearly these issues are not conducive to the type of cohesive work efforts required of a well-functioning anesthesia care team. And speaking of the anesthesia care team, we are troubled that only one author, Cohen, mentioned our CRNA colleagues, and then only to take us to task for not providing evidence of long-term monitoring of these individuals. The failure of the other authors to mention CRNAs and other nonphysician ACPs is perhaps explained by the fact that four of the six letters were authored by physicians who either work in programs specializing in the treatment of physician addiction or work with their state's HPP. As such, the authors might reasonably be expected to focus more on physicians. However, our dismal experience with relapse in drug-abusing nonphysician ACPs, when contrasted with the excellent results these authors claim in their letters, may, in part, explain these letter authors' bias against our proposed policy. But to answer Cohen, all but one of the CRNAs caught abusing workplace drugs left our employment by their own choice. Whether or not there was long-term monitoring in such cases is impossible to know, and the only follow-up we receive is from sad tales through old friends of multiple relapses and, in several situations, deaths. The one CRNA who remained in our employ relapsed multiple times and was ultimately dismissed. This episode occurred in the mid-1980s, and the records of the level of aftercare are unavailable to us because of confidentiality concerns.

While some of the letter authors referenced best-practice models of care and the (possible) acceptable outcomes they provide, it is clear that not all ACPs, including many of our CRNA colleagues, receive such superb care and aftercare. The expense of residential chemical dependency care (approximately $25,000 for the first month and $7,000–$10,000 for subsequent months [Marvin Seppala, M.D., personal communication, e-mail January 6, 2009] is a significant obstruction to many lacking the financial wherewithal of a physician's income. Many have lost their job at this point, and such treatment would be financially ruinous. As such, they are often left to seek care in the outpatient setting, which many experts in chemical dependency feel may not offer the services and support required for successful long-term recovery. Even so, at approximately $5,000 to $9,000 for 6 to12 months of outpatient care, the cost may still be prohibitive (Marvin Seppala, M.D., personal communication, e-mail January 6, 2009). As well, the cost of the frequent (*e.g.,* initially 4–6-times monthly) monitoring of biologic specimens can be quite daunting (*e.g.,* a gas chromatography mass spectrometry test for fentanyl costs approximately $40 per sample, with an additional collection fee of $10 in one facility [Jones S, MN, Office Manager, Health Professionals Services Program, telephone conversation January 7, 2009]). Generally, this cost is borne by the employee, not the employer or an insurance company.

At present, the system (or, in some locales, lack of system) used to address drug-abusing anesthesiologists has wide disparities between best-practices and worst-practices. Hedberg* has proposed criteria that portend a good chance of success for return to the workplace. As suggested by several of the respondents when all of these criteria have been met, and the individual is reentering the workplace within the framework of a well-functioning HPP, we would concede that a second chance at anesthesia employment is not inappropriate. As these letter authors state, when all of these elements are present, considerable success can be expected. However, when one or more elements are missing, failure—assessed by recidivistic behavior and potentially death—becomes more likely.* As well, it must be pointed out that California, the state with the largest physician population in the United States, has recently shut down its HPP.† Quoting the President of the California Medical Board, ". . . the diversion (HPP) program not only did not protect the public, but it was a failed concept, despite 27 yr of efforts to improve it." He added, "Audit after audit showed the plan did not work for some participants. Abuse of the privilege of the program by some participants repeatedly put consumers at risk. Repeat offenders were pointed out in several audits as well as the ability for the participants to game the system." Clearly, not every HPP is an unmitigated success.

Despite statements to the contrary by many of the letter authors, it remains our belief that in many instances the current approach to the drug-abusing ACP is to assume that a premium should be placed on returning the provider back to anesthesiology practice, even when some of the critical elements of the aforementioned formula of Hedberg* are missing. We believe that, in the minds of many, this constitutes the "default" position. Our view was simply to approach this problem from the other end of the spectrum: *i.e.*, the default should be to *not* return the drug-abusing ACP to the practice of anesthesiology until we can ensure that all of the elements of the aforementioned formula are addressed. While we do not question the importance of clinical judgment in determining the treatment and aftercare most appropriate for an individual patient, we also believe that any omissions in the patient fulfilling all of the obligatory criteria of Hedberg‡ will dictate that the drug-abusing ACP is "out" of anesthesiology practice. Our recommendations suggest that anesthesiologists who have become addicts should move to a practice setting with a less access to potent anesthesia drugs. Nonphysician ACP colleagues would move into a clinical setting where narcotic control mechanisms (*e.g.,* witnessed administration and wasting) is possible, although doubtless at some loss of income and prestige.

In reply to Katz's concern about our lumping together of "anesthetic drugs" and "supplements," we concur that this was awkward wording. It was our desire to avoid verbosity while still conveying that we were speaking not only of parenteral opioid dependence, but also of propofol and volatile anesthetic abuse with their apparently equivalent risk of relapse and death. We stand corrected.

Clearly more research and practical application of the research findings are needed if we are to most appropriately care for those ACPs discovered to be abusing drugs. For example, are there any data to support the traditional 3- or 5-yr monitoring period? Given that one often hears chemical dependency experts state that "physicians are good at getting into compliance, but not good at getting into recovery," would not a lifelong monitoring program be more appropriate? We would admit that a "one strike, you're out" policy is overzealous should future research reveal that all addicted ACPs are receiving optimal care and aftercare, and that they in fact have no higher risk of death than practitioners in other areas of medicine. Until some future time when such data might become available, we believe that the path that presents the least potential harm is redirection into another area of practice those ACPs who have abused addictive drugs diverted from the workplace.

In closing, we applaud those authors who wrote to this journal to share with readers their exemplary experiences. Hopefully their experiences can be used as a beacon to guide others toward an ideal approach to dealing with drug-abusing ACPs, and to influence those locales where the approach to this problem is far less enlightened. However, before we concede that these programs represent a final solution for drug-abusing anesthesiologists and other ACPs, it is imperative that we have adequate research data (using valid study designs and outcome metrics, and appropriate data analysis) demonstrating these programs appropriately care for at- risk practitioners and the patients otherwise destined to be in their care.

* Hedberg EB. Anesthesiologists: Addicted to the drugs they administer. ASA Newsletter 2001; 65 (http://www.asahq.org/Newsletters/2001/05_01/hedberg0501.htm) Last accessed 1/27/09.

† http://www.mbc.ca.gov/licensee/diversion.html. Last accessed 1/27/09.

‡ Hedberg EB. Anesthesiologists: addicted to the drugs they administer. ASA Newsletter 2001; 65 (http://www.asahq.org/Newsletters/2001/05_01/hedberg0501.htm). Last accessed 1/27/09.

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In Reply:—We read the letters to the editor written in response to our review article[1] and the accompanying editorial[2] with great interest, and we are encouraged by the enthusiasm generated for this very important discussion.

Drs. Skipper and DuPont contest our assertion that "outcomes have not appreciably changed" during the period of time covered by our review (1992–2007), and cite three papers to support their position.[3–5] Each of these papers report similar positive outcomes for physicians treated and monitored by physician health programs, but they specifically do not indicate any improvement in outcomes in the periods covered (1991–2005). These reports support our assertion that "outcomes have not appreciably changed." In interpreting these studies, it is important to appreciate that the selection process, which is generally described as individuals who *complete* a multiyear program, tends to systematically eliminate early relapsers from the data set. Nonetheless, these are peer-reviewed reports that could and perhaps should have been cited in our review. We agree that treatment and monitoring by a physician health program is essential if an anesthesiologist wishes to return to clinical practice.

Skipper and DuPont also cite the lack of evidence for patient harm reported in the 2005 study by Domino *et al.*; however, lack of evidence is not the same as lack of harm. We believe is it both self serving for the addicted practitioner as well as somewhat irrational from a neurophysiologic perspective to argue that an individual who is managing a addiction that requires diverting medication from their patients is a competent anesthesia provider. One might argue that given a stable dose of methadone, one could be an attentive and focused anesthesiologist. As pointed out by Dr. Torri, when someone is diverting drugs and charting it on a patient's record, one need not look further for harm. To suggest that harm is only measurable in morbidity and mortality is indeed to minimize the role and value of modern anesthesia practice.

Although we had a serious discussion as to whether to suggest a "one strike, you're out" policy for anesthesia practitioners, we chose to suggest an individualized approach. It should be noted that asking a trained nurse or physician to find another specialty of medicine in which to practice is hardly draconian, and we find it difficult to assert that individuals have some form of right to return to the scene of the crime. We note that "out" could easily mean out of clinical medicine entirely, but even this scenario allows for alternative careers. However, we are also acutely aware of individuals who were treated for substance abuse who have been successfully practicing anesthesiology for 20 or more years without a relapse. Unfortunately, these cases are rare. The suggestion made by Berge *et al.* is a simple solution without ambiguity, but each case of addiction and recovery has its own narrative that we believe merits consideration. We applaud the assertion made by Dr. Katz that if, as a society, we are going to adopt a "one strike, you're out" policy, it should be based on evidence. However, we add with some resignation that the lack of appropriate evidence does not diminish the imperative to make decisions when confronted with an addicted colleague.

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Looking Beyond Model Fidelity

To the Editor:—We read with interest the article by Chandra *et al.* in which the authors address the cost-effectiveness of simulation-based teaching of procedural skills.[1] The authors compared an inexpensive low-fidelity simulator to a relatively expensive high-fidelity simulator for learning a complex psychomotor skill: Fiberoptic orotracheal intubation. They found that the high-fidelity simulator had no additional educational benefit.

These findings are consistent with the results of other research that has found low-fidelity models to be as effective as high-fidelity models

The above letter was sent to the authors of the referenced article. The authors did not feel that a response was required. —James C. Eisenach, M.D., Editor-in-Chief.