To the extent that O'Connell's letter is accusatory, I find it objectionable. We need to make more peace, not war, on issues of drugs in our society. My preference is to consider alternative perspectives respectfully and to challenge them forcefully when necessary. As I conclude in my review, "this is especially the case when we are dealing with problems as complex as those involved with substance use disorders."

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In Reply.—Dr O'Connell complains that my book, *The Selfish Brain: Learning From Addiction*, is not referenced. He may be reassured to know that the book was peer reviewed by the publisher and the American Psychiatric Press and that *JAMA*'s reviewer, Dr Khantzian, is a distinguished opponent of many of my drug policy recommendations, which he makes clear in his review. The book lists 43 recommended books on related topics in the section "Bibliotherapy." Finally, O'Connell and other readers seeking more citations can find ample references in my many published articles on drug policy, including those cited below.[1-4]

The Selfish Brain is not a drug policy book. Instead, it offers an integrated, comprehensive understanding of the uniquely human and 20th-century problems of addiction to alcohol and other drugs. The most important features of the book are the recognition of the newly elucidated biology of reward as the principal biological root of addiction and a single-minded focus on the vital role of the 12-step programs, including Alcoholics Anonymous, in promoting lifelong recovery from addiction.

O'Connell misunderstands my support for drug testing. Testing for alcohol and other drugs is important for both prevention and treatment, because denial is, along with loss of control or unmanageability, 1 of the 2 principal characteristics of addiction. It is only when denial and dishonesty are stripped away from addictive behavior that the healing forces of recovery can begin the transformation of the addict and the addict's family. I have known many addicted people who date the beginning of their recovery from the time they were "caught" in the criminal justice system, the workplace, or elsewhere as a result of a positive drug test result.

I am grateful to the American Psychiatric Press for publishing the book, to *JAMA* for having it reviewed, and to O'Connell for bringing additional readers to the book.

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1. DuPont RL, McGovern JP. *A Bridge to Recovery: An Introduction to 12-Step Programs*. Washington, DC: American Psychiatric Press; 1994.
2. DuPont RL, Voth EA. Drug legalization, harm reduction, and drug policy. *Ann Intern Med*. 1995;123:461-465.
3. DuPont RL, Gold MS. Withdrawal and reward: implications for detoxification and relapse prevention. *Psychiatr Ann*. 1995;25:663-668.
4. DuPont RL. Harm reduction and decriminalization in the United States: a personal perspective. *Subst Use Misuse*. 1996;31:1929-1945.

The Spectrum of Medical Care: Curative, Rehabilitative, and Palliative

To the Editor.—The Editorial by Dr Fox[1] insightfully explains the need for reforms in medical education that will enhance a flexible mix of curative and palliative approaches in medical practice, approaches fashioned to the needs, value systems, and specifics of individual patients rather than to diseases and organ systems. "For most patients neither a purely curative model nor a purely palliative care model is altogether suitable, . . . [since] most have chronic disabling conditions as well [as curable conditions]." Fox concludes, "Reframing the problem with medical education in terms of its relative emphasis on the various models of medical care may help to marshal resources to effect essential changes in medical school curricula and graduate medical education programs." I agree wholeheartedly with this approach, but I have a suggestion that the semantics of her curative vs palliative care models need modification.

The incorporation of rehabilitative and restorative care—efforts to improve function and restore homeostasis in chronic, disabling conditions—within the palliative paradigm is neither appropriate nor rigorous. Rehabilitative and restorative care and the general treatment of chronic diseases are a major aspect of medical and health care and describe the approach to patients that fills the huge gulf between curative and palliative care.

While palliative care usually focuses on comfort, alleviation of pain, and emotional support in coping with dying, death, and loss, rehabilitative care focuses on a "work ethic" and often involves a contract-driven relationship between the patient and clinicians. While we want our hospice patients to be as free of pain as possible, our rehabilitating patients may be presented the time-honored slogan "no pain, no gain" to motivate them to "come back" to full life.

Reforms in medical education are being discussed in many venues and are desperately needed. But if those reforms are to maintain a high ethical standard, they will have to incorporate team approaches to patient support and rehabilitation that are not limited to palliative and curative care education. In fact, the broadened definition of palliation presented by Fox causes confusion. Most medical care in the current and coming era belongs conceptually—although closer to the palliative approach with its sensitivity to the wants and needs of the individual—within a different paradigm, one that requires an exclusive definition and for which practical experiential and didactic teaching models already exist and could be readily incorporated into medical school and residency training.

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1. Fox E. Predominance of the curative model of medical care: a residual problem. *JAMA*. 1997;278:761-764.

In Reply.—Dr Sapir's comments reflect a misreading of my Editorial.[1] He represents me as supporting a "broadened definition" of palliative care in which rehabilitative and restorative care are subsumed within the palliative care paradigm, and he also seems to misconstrue my remarks to suggest that all medical care is either curative or palliative. In fact, I argued precisely the opposite, that the curative model and the palliative care model are 2 diametric extremes:

> It is a mistake to view the curative model and the palliative care model as the only 2 options available. Instead, the two models represent opposite ends of a spectrum in which limitless variations are possible. . . . Between the curative model and the palliative model lies an unnamed approach that supports all legitimate goals of medicine—health promotion, prevention, rehabilitation, life preservation, comfort, and care—and is willing to combine them in whatever manner best reflects the values of an individual patient. The flexibility of this approach makes it appropriate for all cases in which neither the curative model nor the palliative care model alone will do.[1]

Perhaps a misunderstanding was created by my reference to the World Health Organization's definition of palliative care: "the active total care. . . of patients whose disease is not responsive to curative treatment." Taken literally, these words might be interpreted to mean that the care of all patients with chronic diseases is properly characterized as palliative. But my personal concept of palliative care is not nearly so broad. Rather, in my view, the palliative care model is applied most appropriately to patients who are entering the f predictably progressive course toward death.

Thus, I concur with Sapir that rehabilitative c within the palliative care paradigm. However, I his assertion that rehabilitative care "fills the tween curative and palliative care." Just as the c and the palliative care model are each characte herent set of assumptions, attitudes, and value rehabilitative model. As Sapir so aptly describ tive care focuses on a "work ethic" and embodies pain, no gain." Although rehabilitative care clea for many patients whose needs are unmet by pur pure palliative models, no approach that focuse a single predetermined goal would suit them a

Finally, Sapir argues that rehabilitative care distinct conceptual paradigm that warrants its Although I agree that meaningful differences rehabilitative, curative, and palliative care, de tics misses the point. The central thesis of my E the current medical education system is excess toward cure at the expense of other important cine such as palliation and rehabilitation. I su stop trying to fit patients into predefined model stead on fitting our models to the patients we

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1. Fox E. Predominance of the curative model of medical care: *JAMA*. 1997;278:761-764.

Preserving the Clinical Research Ecosystem

To the Editor.—The Commentary by Drs T Moskowitz[1] on preserving the clinical resea should be applauded. In more than 40 years o pharmaceutical research and development, d have had the good fortune of seeing 20 new enter the marketplace, I have been impresse portant impact that good clinical research ha development process. In essentially every ins we were able to carry out sophisticated early c we markedly shortened the time required for ment and improved the odds of approval for m especially frustrating in this day and age to wi between the high-caliber end points that we a measure in the process of drug discovery an (eg, cytokine levels, gene function) and available out such work.

Financial belt-tightening is occurring acros spectrum from the National Institutes of Heal maceutical industry. The call for a top-level ass address the serious problem of the reduction search personnel and facilities is indeed appropr vantage point, the situation is frightening, to say budgetary restriction is so prevalent and a dec research capability will easily go unnoticed in future because of the long lag time inherent in drug discovery and development. If all clinical ity in drug development were to cease now, for ex require 6 to 10 years before it was clearly evide at large and to many physicians that the nex new drugs is simply not going to appear as ex

The cross section of professional societies medical organizations that was noted in the arti a consortium that places appropriate professio the politicians and the directors of managed hea