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The Three Missing Elements in the Treatment of Substance Use Disorders: Lessons from the Physician Health Programs

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Abstract

To make recovery, and not relapse, the expected outcome of the treatment of moderate to severe substance use disorders (SUDs), three currently missing elements would need to be emphasized: 1) the definition of long-term recovery as the goal of all treatment and post-treatment interventions; 2) the provision of sustained post-treatment monitoring and professional and peer support, including drug testing, ; and 3) the insistence by others around the patients on sustained

abstinence as crucial for those suffering from moderate to severe and prolonged SUDs. Each of these three elements is central to the distinctive care management system of the state physician health programs (PHPs). This approach to the long-term management of SUDs fits with the new direction of healthcare for serious, chronic diseases – away from isolated, and expensive acute care episodes of care and toward sustained chronic disease management with long-term monitoring, support, and early re-intervention if and when needed.

Keywords: substance use disorder treatment, physician health programs, care management\

ACCEPTED MANUSCRIPT

The heightened commitment to provide treatment for people suffering from substance use disorders (SUDs) runs into a stubborn fact: 95.5 percent of people meeting diagnostic criteria for a SUD do not perceive that they have a health problem or need addiction treatment (1). Further, most of those who recognize that they have a problem do not seek treatment (1). Of the small percentage of people who do seek treatment, only 41.3 percent successfully complete primary treatment (2) and more than half of treated individuals experience SUD recurrence following discharge (3). Of course many people with serious medical disorders also fail to get treatment and when they do obtain it many fail to adhere to treatment. For example, as part of their treatment adults with diabetes and coronary artery disease are often given medication, education, and assistance to change their behaviors related to diet and exercise but are unsuccessful in making these changes. However, the gaps in access to treatment and in rates of success when treatment is obtained are so striking among individuals with SUDs that recurrence is sometimes defined as a feature of the disorder itself.

The new brain biology of addiction explains this all-too-characteristic pattern. Substances linked to SUDs produce super stimulation of the brain's healthy reward system, far greater than the stimulation produced by natural rewards such as food and sex. A SUD can be viewed as a state in which impulse control is diminished while compulsive behavior is enhanced. In the cycle of addictive behaviors, the initial intoxication phase is fueled by dopamine release from ventral tegmental area neurons into the nucleus accumbens and other subcortical regions. On withdrawal from the drug, a negative affective state conceivably is mediated by the extended amygdala and the locus coeruleus. As craving sets in, multiple brain regions contribute to the impulse to use again. The overwhelming urge to use again is not counterbalanced by frontal cortical regions that

normally brake impulsive behaviors. In the addicted state, these restraining brain regions function at diminished capacity. In the progression from use to abuse to the addictive state, multiple neural circuits undergo adaptations, initiated by the mesolimbic dopamine reward center. Ultimately activity is enhanced in the reward regions of the brain by drug stimulation while the dominance of cortical regions that confer judgment and restrain impulsive behavior is reduced (4-6).

These changes in the mesolimbic dopamine system and the prefrontal cortex explain the poor decision making, behavioral changes and both the lack of recognition of addiction and poor outcomes of interventions. The reprioritization of drive states associated with excess dopamine release results in an altered focus of reward associated with continued substance use, which is experienced as more powerful than other rewards, even survival-based behaviors (7). Thus, those with severe SUDs may risk their lives to continue drug use and certainly lose sight of other rewarding activities. The alteration of the prefrontal cortex plays a role in the inability of the individual to recognize and respond to the consequences of substance use (8). Not only are addicted individuals driven to use by remarkable subconscious forces in their brains, but they cannot fully see the problem for what it is nor can they adequately plan and carry out means to change without significant intervention and effort.

Thus these individuals experience impaired decision-making, distortions of values and character, and cycles of remission and recurrence that typify addiction (9-11). These potentially long-lasting changes suggest the tremendous unmet challenges involved in achieving recovery from the most severe, complex and chronic SUDs and the need for better, and sustained recovery management (12).

Common clinical experience demonstrates the power of this brain biology. While many alcohol and other drug users learn from a few negative experiences to permanently reduce the frequency and intensity of use or cease using entirely (13), people with the most severe SUDs, in stark contrast, often do not change their behavior despite repeated serious problems (14). In fact, as noted above, most resist the ideas that they have a substance-related problem or that they could benefit from professional treatment of that problem. While some individuals with SUDs have cumulative or sudden transformative experiences that provoke recovery initiation (15,16), many require the influence of the environment, often after serious consequences resulting from the individual's substance use. The family, the employer, the physician, the criminal justice system and the child welfare system have historically played important roles in provoking the acute crisis that leads to treatment-seeking. When this crisis has passed and help obtained, the cognitive distortions and ambivalence related to substance use often return, leading to treatment disengagement and SUD recurrence—a fact dramatically indicated by the less than 50% addiction treatment completion rate in the US (17).

Treatment for SUDs must take into consideration the brain biology of substance use disorders and the long-term, even lifelong, risk of relapse that characterize addiction. Many treatment programs, and some families, consider reducing or cutting down substance use, even for a while, to be a good outcome. The problem with this goal of treatment is that people with chronic SUDs can seldom retain a stable non-problem-generating level of alcohol or other drug use (18,19). We are further persuaded by our clinical experiences that no use, i.e., complete abstinence, is the most appropriate and sustainable goal for the most severe and complex SUDs. We are reinforced in our support for this goal by the collective experiences of people in recovery

from SUDs, including health and mental health professionals. The goal of abstinence is the prevailing standard of recovery maintenance among the 12-Step fellowships (i.e., Alcoholics Anonymous, Narcotics Anonymous, etc.) as well as nearly all of their secular and religious alternatives (e.g., Women for Sobriety, Secular Organization for Sobriety, SMART Recovery, Celebrate Recovery, etc.). Abstinence from the use of alcohol and other drugs is the position based on the experience of millions of people in long-term recovery from the most severe SUDS (20). It is noted in the ubiquity of the "sobriety date" (i.e., the last day of use of alcohol or other drugs) in recovery mutual aid organizations.

There is one well-established national system of care management that makes long-term recovery, and not cycles of SUD recurrence, the typical outcome of treatment. The nation's state Physician Health Programs (PHPs) manage the care of physicians with SUDs and other mental health and behavior disorders. The 1973 publication of an article from the American Medical Association acknowledged physician impairment, including the prevalence of substance use disorders among physicians, highlighting the need for management of these physicians (21). Many PHPs began and continue today to be under the leadership of physicians in recovery who are eager to help others in health care attain recovery. Although the state PHPs are each unique, they share a core identity involving an initial formal medical evaluation, intensive but relatively brief substance abuse treatment when indicated that is followed by long-term intensive, random monitoring to validate abstinence from any use of alcohol or other drugs of abuse. They require a sustained commitment to Alcoholics Anonymous, Narcotics Anonymous and other community self-help groups. The PHPs innovate and evolve while also collaborating. The Federation of State Physician Health Programs (FSPHP) which began in 1990 now includes 42 state programs.

PHPs typically address not only substance use disorders, but psychiatric, conduct and other disorders. Many also serve other health care professionals (22).

Physicians with SUDs are closely supported and monitored for five years or longer through assertive linkage to recovery support resources and the use of sustained and comprehensive random drug and alcohol testing (22). Any detected use of alcohol or other drugs leads to removal from medical practice and puts physicians at risk of losing their professional licenses. These programs begin with a thorough evaluation. When there is a diagnosis of an SUD, then a physician is referred to treatment, typically three months of residential or intensive outpatient treatment followed by three to 12 months of outpatient treatment (23). Other coexisting disorders are also treated as-needed. Although SUD treatment is a relatively brief part of the five years of care management, throughout the entire monitoring period, physicians are required to frequently attend peer-based recovery support meetings, most commonly the 12-Step fellowships of AA and NA and/or Caduceus meetings.

The PHP system of care management not only gets physicians into treatment, but it also ensures that physicians complete treatment. Importantly, PHP care extends the benefits of treatment long after treatment ends. This care management system reliably produces recovery that is enduring for the large majority of participants. A national study of 16 PHPs showed that over the course of five years of monitoring, 78 percent of physicians with SUDs never had a positive drug or alcohol test (23). Of those who did test positive during this time, two thirds had only one positive test.

Although many physicians are referred to their state PHP by others, often their employers, the care management provided by the PHPs is voluntary. Every physician signs a

contract with the PHP accepting the terms of this system of managed care specifically because the PHP provides safe harbor for the physician who would otherwise face disciplinary actions. This is a strong motivator for abstinence, as is exposure to other physicians in long-term recovery. This mix of support and leverage provided by PHPs to ensure physicians succeed in adhering to their contracts is not exclusive to physicians; these elements of support and leverage can also be used by the criminal justice system as well as by family members, employers, and health care professionals to help individuals with SUDs initiate and complete needed treatment and achieve long-term recovery.

This approach, which focuses on managing the environment in which decisions to use or not to use are made, has been called the "New Paradigm" because of its distinctive characteristics (24,25). The model of the New Paradigm has been broadly and successfully adopted within other professional assistance programs (e.g., nurses, pharmacists, psychologists, lawyers, airline pilots). It has been successfully adopted in several innovative criminal justice programs, including HOPE Probation and 24/7 Sobriety, demonstrating that the principles can be applied to populations that are dramatically different from physicians (24,26). While it could be suggested that PHP approaches and outcomes are not applicable to the general treatment population because of particular advantages of physicians that might enhance treatment outcomes, our experience in evaluating PHPs suggests physicians as a group share many characteristics that could compromise long-term treatment outcomes, e.g., ready access to powerful psychoactive drugs, elaborate systems of enabling that mask SUDs and inhibit help-seeking, a common pattern of multiple drug use, and high rates of co-occurring medical and psychiatric disorders. Achieving high rates of sustained recovery in spite of these obstacles

suggests the potential for application of PHP principles and practices to broader SUD populations.

The average cost per physician in the PHPs was about $4,000 (27). The operating costs of PHPs are paid for primarily through a charge of approximately $23 added to physicians' licensing fees each year (28). The costs of treatment for physicians, which is borne by the physicians and their health insurance, ranged from $5,000 to $40,000 depending upon the type(s) of treatment (i.e., outpatient and/or residential) obtained. The PHP model has been adopted by the Caron Foundation, a network of integrated behavioral treatment centers, as an option for patients leaving residential treatment at a cost of about $7,500 a year (29). The costs of this care management are substantial but by making recovery and not relapse the expected outcome of treatment they can be seen as very reasonable.

The PHP care management system incorporates three essential elements which we consider the missing elements in the way SUDs are most frequently managed today. The first missing element is the definition of recovery (sustained abstinence, improvements in global health, and enhanced character) as the goal of treatment and post-treatment recovery maintenance. The second missing element is the provision of intensive, sustained random monitoring for any use of alcohol or other drugs as well as professional and peer-based recovery support through treatment and for a minimum of five years following treatment. These two elements maximize post treatment recovery stability and afford opportunities for early re-intervention if and when needed. The third missing element in managing SUDs is perhaps the most important and illusive and relates to the roles of those around the people suffering from SUDs. When others ignore the addict's problem, they enable the problem to continue. When they

intervene, insist on the goal of recovery, and provide the necessary support and a path to recovery, they play an essential role for the addict precisely because addiction produces significant brain changes. Addicts suffer in an abuse chemical love affair, repeatedly seeking out and returning to their abusive lovers in the vain hope that the next time it will turn out differently. The essential role of those around the addict is to insist that the next time it will be worse, not better. The combination of these three elements – monitoring with consequences, recovery support and the insistence of those around the addict on sustained abstinence – within the PHP model is what enables this care management system to make recovery the expected and most frequent outcome of SUD treatment.

Delivering treatment in brief, disconnected episodes of care with no sustained monitoring and support is wasteful of resources. It puts patients at serious risk for rapid SUD recurrence. The PHP approach recognizes the brain pathology inherent in addiction and assertively manages the resulting vulnerabilities through the period of compromised executive decision-making and the achievement of stable recovery self-maintenance. The changes associated with recovery require a great deal of time. While many SUD recurrences take place within the first six months after treatment, the risk of recurrence continues long after treatment. People leaving treatment need substantial support and serious contingencies that hold them accountable. Confrontation of any substance use and insistence on abstinence are essential through the early years of recovery. When individuals are in recovery there is a remarkable change in their thinking and, over time, in their characters. Treatment and sustained recovery management facilitate this transformation--a transformation that is often the inspiration behind healthcare professionals choosing this area of

practice. Addiction recovery is one of the most impressive changes to be found anywhere in healthcare.

The New Paradigm, exemplified by the PHP system of care management, recognizes the brain biology that lies behind the impaired thinking and compulsive drug-use that is disturbingly characteristic of SUDs. It also recognizes that the outcomes of typical management of SUDs leave most individuals in need without care and, for those who do get treatment, it makes post-treatment SUD recurrence all-too-common.

Importantly, this new approach to the long-term care management of SUDs fits with the current direction in which healthcare, and in particular the management of chronic serious diseases, is moving from isolated, recurring, and expensive acute care episodes to assertive and sustained chronic disease management. Health care increasingly identifies serious chronic diseases and actively manages them for the long-term, often for lifetimes, with the goal of preventing recurrences and, failing that, of identifying recurrences early and intervening quickly. This is the path of the New Paradigm, one that has the potential to dramatically improve long-term outcomes for SUDs.

The best long-term manager of the care of people with SUDs is the healthcare system itself. Recognizing the high prevalence and the seriousness, as well as the chronicity, of SUDs supports adoption of the model of the nation's PHPs, including not only active, sustained random monitoring and the commitment to the goal of recovery including abstinence from the use of alcohol and other drugs, but also the support of the 12-Step and other fellowships and the support that the PHPs provide to physicians. This path makes recovery the expected outcome of SUD

treatment. It lowers the costs produced by today's revolving doors, and the high costs of treating SUDs.

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