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Evolution of Concept - But Not Action - in Addiction Treatment

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Abstract

The Western approach to drug abuse treatment involves a medical or disease orientation to understanding the onset, course and management of addiction and a clinical goal of abstinence or very significant reductions in drug use, usually with a combination of behavioral and pharmacological interventions. Even within this Western approach, and despite several consensually accepted features of addiction, a significant mismatch remains between what this culture has come to accept as the nature of the disease and how that same culture continues to treat the disease.

This paper discusses the evolution of these Western concepts over the past decade without a corresponding evolution in the nature, duration or evaluation standards for addiction treatment1. Here we take the position that continuing care and adaptive treatment protocols, combining behavioral therapies, family and social supports, and where needed, medications show much promise to address the typically chronic, relapsing, and heterogeneous nature of most cases of serious addiction. By extension, methods to evaluate effectiveness of addiction treatment should focus upon the functional status of patients *during the course of their treatment* instead of after treatment has stopped as is the evaluation practice used with most other chronic illnesses.

Keywords

addiction; treatment; chronic illness; evaluation; health care; relapse; continuing care; continuum of care; heterogeneity

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"The secret of getting ahead is getting started.

The secret of getting started is breaking your complex and overwhelming tasks into small manageable tasks, and then starting on the first one."

Mark Twain

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[1]Treatment can be briefly and usefully defined as a planned, goal directed, temporally structured change process, of necessary quality, appropriateness and conditions (endogenous and exogenous), which is *bounded* (culture, place, time, etc.) and can be categorized into professional-based, tradition-based, mutual-help based (AA, NA, etc.) and self-help ("natural recovery") models. There are no unique models or techniques used with substance users- of whatever types and heterogeneities-which aren't also used with non-substance users. In the West, with the relatively new ideology of "harm reduction" and the even newer Quality of Life (QOL) treatment-driven model there are now a new set of goals in addition to those derived from/associated with the older tradition of abstinence-driven models. Treatment is implemented in a range of environments; ambulatory, within institutions which can include controlled environments. Editor's note

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Introduction

It has been more than ten years since the publication of an article in the *Journal of the American Medical Association (JAMA)* that considered the question of whether serious addiction to alcohol and/or other drugs might be best conceived of as a chronic illness (McLellan, Lewis, O'Brien, & Kleber, 2000). Of course the idea of addiction as an illness was not unique or even original to that article. Over the past three centuries many writers have suggested thinking of addiction as an illness rather than as a sin or a bad habit (Durrant & Thakker, 2003)[2] or as a crime. But that 2000 *JAMA* paper added to this discussion by specifying that serious addictions might be best considered "chronic illnesses", and by making direct medical comparisons with well-studied chronic illnesses such as diabetes, hypertension, and asthma.

The conclusion from the paper was "…in terms of vulnerability, onset, and course, drug dependence is similar to other chronic illnesses, such as Type 2 diabetes mellitus, hypertension, and asthma" (McLellan et al., 2000; page 1693). Because of that conclusion, the paper was surprising to both general medical practitioners and workers in the addiction field. The paper received a great deal of attention then, and it continues to be widely cited ten years later. Indeed, that article and the conclusions derived from it form much of the foundation for the United States 2010 National Drug Control Strategy (Office of National Drug Control Policy, 2010).

During the past decade other scientific findings have further contributed to our understanding of the disease processes involved in the onset and course of addiction. First, epidemiological data now suggest that addictions, like other illnesses, have an "at-risk" period. Virtually all cases of addiction have their onset early in life, most often in young adulthood (Kessler & Wang, 2008; Palmer et al., 2009; Wagner & Anthony, 2002; Winters & Lee, 2008). Second, there is a high degree of variability in the course of lifetime drug use patterns in individuals who at one point met diagnostic criteria for substance use disorder (Dawson et al., 2005; Galai, Safaeian, Vlahov, Bolotin, & Celentano, 2003). Repeated cycles of relapse and recovery are common (Anglin et al., 2001; Dennis, Scott, Funk, & Foss, 2005; Hser, 2001; Weisner, Matzger, & Kaskutas, 2003). Third, although there are similarities among individuals in the consequences they experience secondary to addiction, there is also a great deal of heterogeneity in the order of core symptom expression and trajectory from use, to heavy use, to problematic (unhealthy) use, to abuse and dependence. We know now that some of this course variability depends upon the personal characteristics of the individual, the presence of comorbid psychiatric disorders, and the environmental context in which the individual lives (political, family, social resources, etc.).

For example, some individuals will first experience disruption in their close relationships associated with substance use. In other cases, health problems or serious injuries will be associated with substance use, and often be a major impetus for seeking treatment. These clinical characteristics of addiction—early onset, variability in course, heterogeneity of consequences—though not all empirically proven—are well-accepted among clinicians and researchers alike.

[2]There are many disease models; not just one. These include, among others, bio-chemical based models, actuarial, functional, experiential, social, political, religious-spirit-animism, economic and consumer based models. Secondly, each have their own critical definitions, criteria, goals and agendas, constituencies, indicated and contra-indicated techniques and services, ":healers" and change agents, preferred sites for intervention, temporal parameters and stake holders Each have their unique ethical associated issues. The recent "medicalization" of "drug use" (substance use disorder) in the DSM "secular Bible", does not sufficiently serve basic diagnostic purposes of gathering needed information in order to make a needed decision nor give the minimum of needed evidence-based information: etiology, process and prognosis. Editors note.

Implications from the Concept

Given general acceptance of the *concept* of serious addiction as a chronic illness, and increasing understanding about the precipitants, course, and course modifiers associated with that illness, it has been surprising and frustrating that these advances in scientific evidence and thinking have been accompanied by very few changes in clinical practices, research strategies used to evaluate outcomes, or social policies associated with addiction. Of course this is not unique to the substance abuse field. Other areas of medicine and science have also been slow to incorporate conceptual and practice changes. Yet, there are serious cost, health and safety implications from continuing to think about and treat serious addiction as an acute issue.

First, viewing addiction as a "bad habit" or a "sin" has led us to unnecessarily antisocial attributes to both the addiction process itself and to those who become addicted. Second, the nature of our traditional treatments for this "condition"—generally short term, educational, and segregated from the rest of medical care—do not comport with the scientific findings showing similarities between addiction and other chronic illnesses. By extension, these implications suggest that the continuing care strategies with regular clinical monitoring—currently used with other chronic illnesses—may also be sensible, effective, and efficient in the treatment of addiction.

However, these do not appear to be the implications espoused by many practitioners in our field, nor have these findings changed many engrained research practices or social policies in the addiction field. Instead, the observed parallels in genetic heritability, predictors of onset, course, treatment adherence, and relapse rates have often engendered a defense of the clinical and research status quo. Publications and presentations by workers in the addiction field that have cited these findings conclude that:

1. addiction treatment has been more effective than previously realized—relapse rates for addiction are not substantially different from those of "respected" treatments; and thus,
2. this "new" way of thinking about relapse provides a strong rationale for continuing contemporary addiction treatment practices, essentially unchanged—only now with more funding!

In this paper we take the perspective that the accumulating evidence regarding the similarities seen between addiction and other chronic illnesses in disease onset, course, treatment adherence, and treatment response, demand different clinical, research, and policy responses than those used over the past three to four decades. Specifically, we call for improvements in three areas:

1. the way addiction is currently treated and managed;
2. the way treatment is evaluated; and
3. the way professionals are educated about addiction.

Importantly, these recommendations are based on the collective work of several investigative teams and referenced herein.

1. The way addiction treatment is delivered and managed should be consonant with what is known about the onset, nature, course, and heterogeneity of other chronic illnesses,

including addiction. Clinical interventions, including prevention, brief interventions, and formal treatment, should start earlier

Epidemiologic evidence has consistently demonstrated that the peak developmental period for the onset of substance use disorders is young adulthood (Kessler & Wang, 2008; Palmer et al., 2009; Wagner & Anthony, 2002; Winters & Lee, 2008). While considerable variation exists by drug class, Kessler et al. (2005) reported that the median age of onset of a substance use disorder is 20 years of age. Among individuals admitted to treatment where the primary reason for admission was a heroin-related problem, 41% started to use at or before the age of 18. For marijuana, the corresponding percentage was 93% (Office of Applied Studies, 2009). Others have reported that 90% of all individuals with marijuana dependence started using before age 18 and one half before age 15 (Dennis, Babor, Roebuck, & Donaldson, 2002). Despite this evidence, approximately one-quarter of individuals diagnosed with alcohol dependence receive treatment (Hasin, Stinson, Ogburn, & Grant, 2007) and there is a five-year delay among the minority who eventually do access any kind of help (Wang et al., 2005). In a recent study of college-attending young adults with an alcohol or substance use disorder, less than 10% sought any form of help (Caldeira et al., 2009). In a recent analysis of the National Comorbidity Survey, Wang et al. (2005) noted an historical trend for individuals with several types of mental health disorders accessing treatment closer to the time of diagnosis. However, this was *not* true for individuals with drug dependence; recent cohorts delayed help-seeking longer than their older counterparts.

Given this evidence, it is imperative that prevention, regular screening, brief interventions for emerging substance use, and treatment referral for more advanced substance use become part of a broad healthcare policy to prevent, detect, and arrest early cases of substance abuse disorders. This proactive, early intervention strategy should preclude the need for more intensive and costly treatments later when the disorder has fully manifested and several domains of life functioning can be and are adversely affected given the necessary conditions for them to come about.

a. There should be more treatment options—Initiating intervention and treatment efforts earlier will require more – and more attractive - options; and for those options to have much greater accessibility. This too is consonant with findings from other parts of Western medicine. Clinicians in most other areas of medicine have come to understand that few patients respond adequately or at all to the first treatment they are offered; and that it is often difficult to predict which patients will respond well to the available treatment options. In other areas of chronic care a patient is started on a medication or intervention with known benefits and few side effects. If early monitoring shows that the patient is able to comply with that regimen and it shows signs of benefit, that initial intervention is continued. If instead, the initial intervention or medication is not palatable to the patient or not producing benefits—the majority of treatment episodes in virtually all illnesses—a new intervention or medication is suggested. These are expected and accepted tenets of care management and the recognition of generally poor predictability, wide variability in illness expression, and treatment response has been the development of alternative medications, interventions, and monitoring practices—again, designed to make treatment more attractive to the patient and in turn to increase the likelihood of compliance.

There is also clear recognition in other chronic care fields that the patient will need to cooperate with care and to partner with the healthcare system to address the aspects of the illness. In turn, there is recognition that patients will likely not comply with treatments that have significant side effects, are not reimbursed by insurance, or that intrude on their lives.

In too many settings, addiction treatment providers have not recognized the factors governing patient adherence and response to treatments in other chronic illnesses. There are typically very few options available for patients with addiction—and patients who do not agree to comply with the available options are still accused of not being sufficiently motivated to change. There has been too little effort put toward making treatments attractive to patients—reducing the intrusiveness of treatments and/or finding ways to make it easier to adhere to the care that is offered.

b. Clear distinctions should be made among the acute, intermediate, and continuing care stages of treatment—Acute care in other fields of medicine is focused on physiological stabilization to address potentially life-threatening or very serious symptoms that are presenting challenges to function. The last goal of the acute care state of treatment in other chronic illnesses is a smooth transition to the continuing care, monitoring, and management stage of treatment involving help with lifestyle changes and medication adherence, all in the service of maintaining gains made and avoiding relapses. The point here is that these different stages of care have different therapeutic goals and employ different combinations of therapeutic interventions. The individual management of these therapeutic combinations and stage transitions is the still the art of medicine.

Addiction treatment is still not designed to foster continuity of care. Detoxification, not followed by any continuing care is still an unacceptably large proportion of all public treatment episodes. Residential care, usually for periods of less than a month, is rarely followed by active engagement in continuing outpatient care. This segmentation of care has been fostered by the fact that the various segments of the care continuum (e.g., detoxification, residential care, outpatient treatment) are often owned and operated by different organizations that have no obligation or financial incentives to integrate their care or to motivate the patient to continue in the next stage of care (See McLellan, Kemp, Brooks, & Carise, 2008). In turn, purchasers of care have rarely stipulated smooth transitions or continuity across the various segments of care when contracting for treatment. Developing separate contracts for detoxification, residential care, and outpatient treatment is comparable to purchasing the wheels for a car from one provider, the transmission from another provider, and the engine from a third provider. While potentially useful, without an effort to put the parts together, the car won’t operate.

Another factor contributing to the segmentation of addiction treatment is the traditional fact that almost no primary care provider has been trained to recognize substance use-related problems, to perform customary early intervention and symptom management within the primary care environment, or to make an informed referral to specialty care. Virtually all care for addiction has been specialty care—typically for those very severely affected by substance abuse; and that care is too often provided in a time limited program with unitary objectives and time lines. Recent evidence has shown the importance of proactive behavior on the part of treatment program staff in facilitating recovery through specification of continuing care appointments at discharge, making arrangements for sober housing, and assisting with transportation needs to attend monitoring appointments (Schaefer, Harris, Cronkite, & Turrubiartes, 2008). Humphreys and Moos (2007) demonstrated the benefits of encouraging individuals to become involved in self-help groups to promote abstinence.

c. Monitoring should be a clinical process during the course of treatment, using standard measures to monitor progress—Monitoring has been considered an important and highly effective therapeutic component in continuing care for all other chronic illnesses, but is just now receiving attention as a clinical intervention in the addiction field (Dennis & Scott, 2007). Clinical monitoring for other illnesses is reimbursed by all insurance companies because they realize that effective monitoring of patients will

help to maintain therapeutic gains, alert patient and physician to impending relapse, and avert expensive acute care episodes. There are new electronic, telephonic, and web-assisted efforts to monitor patients in other areas of medicine.

Monitoring of patient progress through fundamental measures such as attendance, treatment participation and particularly urine drug screening has not been considered a therapeutic ingredient in most contemporary forms of addiction treatment. The two exceptions to this are methadone maintenance and Alcoholics/Narcotics Anonymous (AA/NA). Methadone maintenance uses regular urine screens to check for the effectiveness of the medication and counseling intervention

There have been regular charges that this undermines the "therapeutic relationship" and the trust of the patient. In AA/NA, most of those who continue for any period of time acquire a sponsor and one of their many jobs is to call the "sponsee" on a regular basis to monitor progress toward recovery goals. More recently, several innovative and potentially effective monitoring efforts within the addiction treatment field have been described in the research literature, used in some specialty care programs, but have not yet been incorporated into mainstream addiction treatment (McKay, 2009). These include telephone-based monitoring, assertive continuing care, use of performance measures to promote a continuum of care, and peer-based recovery support. Internet-based continuing care methods are relatively new and have not been thoroughly evaluated, but could be a viable option, especially with the rapid increase in the use of social media tools among younger cohorts.

d. Community infrastructure should support recovery—The successful long-term management of a substance use disorder and maintenance of recovery may not only require the assistance of specialized professionals, but also families and community-level supports. While a complete description of community-based recovery support is beyond the scope of this article, the variety of available services and the increased recognition of their significant place in the continuum of care should be noted (White, 2009).

2. Current methods employed to evaluate addiction treatment must be reconsidered

If addiction is best conceptualized as a chronic illness, then researchers have been evaluating the effectiveness of addiction treatments with the wrong methods and the wrong conclusions (McLellan, McKay, Forman, Cacciola, & Kemp, 2005). For example, in chronic illnesses other than addiction, symptom reappearance during or following treatment (i.e., a relapse) is an understandable and expectable part of the chronic disease process and not cause to consider the treatment ineffective—especially if that relapse is recognized early and handled by simply increasing the intensity of care provided in an office practice or outpatient setting. Indeed, this is one of the most important jobs of the continuing care stage of treatment in *any* chronic illness—the early detection and outpatient treatment of symptom return. Unfortunately, re-use of drugs or alcohol during or even twelve months following treatment is still widely considered evidence of treatment failure in the addiction field. Perhaps more worrisome is the idea that a return to treatment or change of treatment for those who have relapsed may not be worth it. This is not only a very different perception about the meaning of relapse in the chronic illness of addiction, but a disturbingly different interpretation of the medical obligations of practitioners treating addiction.

Many of us who have evaluated addiction treatments have concluded that outcome measurement at least twelve months following discharge is a laudable methodological goal (Finney & Monahan, 1996; Miller, Sheppard, Colenda, & Magen, 2001). McLellan (2002; page 250), stated that "… treatment benefits should be sustained for at least six months following treatment discharge for addiction treatment to be worth it to the patient and to the society that supports that treatment". Indeed, most published treatment evaluation studies

even in the past five years have measured substance use and related consequences six to twelve months *following cessation of treatment.*

Comparisons of outcomes at these post-treatment time points continue to provide generally unsatisfying conclusions. It is unusual to find significant differences between groups who are treated and untreated; or groups who are fully treated and partially treated; or between those treated in the experimental group and those treated in a standard manner.

What would the results of reviews of the addiction treatment literature conclude if the effect sizes were calculated on the basis of the differences in mean values between *pre*- and *during* treatment measures—not pre- to post-treatment measures? This is an interesting and certainly answerable question for the many students of this literature. Enhancement and refinement of treatment protocols will require innovative research designs for evaluation. New models of treatment and evaluation will be developed over the next decade. In this context, a relatively recent evaluation model which has been introduced is the transdisciplinary model (See Sussman, Stacy and Anderson (2004)

Importantly, this should not be read as a diatribe against contemporary forms of substance user treatment. It is clear that many types of treatment can work and many do work on a regular basis in real-world settings. Indeed, we think the use of inappropriate evaluation methods – by us as well as many of our colleagues – may have systematically underestimated the true effects of treatment.

3. Education regarding addiction must improve at all levels within the health care profession and treatment should be more fully integrated into primary care settings

Substance use and misuse are highly prevalent in outpatient, inpatient general medical, and intensive care settings, yet there is a lack of adequate training regarding addiction within medical schools and residency programs (Miller et al., 2001). This is in part because addiction is still considered to be a specialty field that is different from the rest of healthcare —particularly healthcare for chronic illness. In fact, there are clear curricula and operational foundations for the teaching of basic screening, diagnosis, medication management, indications for brief therapies, and monitoring techniques, in the field of addiction medicine. Effective physician education and training programs as well as published curricula are available. Core competencies for screening, treatment, and management of substance use disorders have been endorsed by prominent medical education groups and specialty societies (Fiellin, Butler, D'Onofrio, Brown, & O'Connor, 2001). It is no longer reasonable for residency programs to fail to address these competencies as it is medically, ethically, and fiscally irresponsible to do so.

Moreover, consistent with the general theme of this article, these basic elements of addiction medicine teaching and training are quite similar to the basic elements that should be the foundation for the diagnosis and management of most other chronic illnesses. Therefore, teaching about the etiology of substance use disorders, how it can be related to other medical conditions, and how it can be best treated needs to be on a level playing field with what is learned about other common chronic diseases in the educational environment for all health care professions, especially for those related to adolescent medicine and adult primary care. The Program to Integrate Substance Abuse Issues into Mainstream Medicine (PRISM) was launched in 2002 to facilitate the identification of substance use among patients in medical practices (see www.tresearch.org/prism). This project serves as an example of how physicians can adopt standardized protocols for the assessment and management of substance use disorders.

Standardized screening instruments (e.g., CAGE, AUDIT) have been utilized within primary care settings to identify at-risk drinking and substance use. Screening and brief interventions provided by physicians or nurses have been demonstrated to reduce alcohol consumption among "at-risk" drinkers and illicit drug users (Madras et al., 2009; United States Preventive Services Task Force, 2004). Combination approaches that include counseling and medications such as naltrexone or acamprosate have been shown to be effective in reducing consumption among alcohol dependent individuals (Saitz, 2005) and these approaches may be effective when used in primary care (O'Malley et al., 2003). Similarly, opioid maintenance treatment has been shown to effectively decrease drug use while improving health and social outcomes (O'Connor & Fiellin, 2000). More recently opioid-dependent individuals have been successfully treated in primary care settings using methadone or buprenorphine (Sullivan & Fiellin, 2008).

Conclusion

The field of addiction treatment has accepted the concept of addiction as a chronic medical illness—but our field has embraced it only at the conceptual level and has been slow to engage in efforts to reconfigure care for addicted individuals in a systematic manner that would be consistent with the treatment, monitoring, and outcome evaluation of other chronic illnesses. This has been a missed opportunity for our patients, for the addiction treatment community, and particularly for the rest of healthcare. Reliance on specialty care centers to provide virtually all addiction care is unfair to the specialty care field (these centers cannot manage that burden), unfair to patients (restricted access and options), and unfair to payers (too expensive and lacking in continuity). Primary care physicians are typically responsible for coordinating the continuing care of most other chronic illnesses; and with proper training and integration, they could become significant determinants of care coordination for patients with most substance use disorders. As is true in the rest of medicine, specialty care will always be needed for those with the most severe and complex problems.

Integrated models have been shown to be cost-effective for individuals who have substance use related medical conditions (Weisner, Mertens, Parthasarathy, Moore, & Lu, 2001). Mertens et al. (2008) studied a sample of private health care plan enrollees with substance use related medical conditions and demonstrated that having between two to ten primary care visits was predictive of remission of substance dependence after five years of follow-up. Samet et al. (2001) have reviewed the benefits of integrating primary care and substance user services and describe various models that can be implemented within today's health care delivery system. Failure to screen, identify, and address these disorders in primary medical settings not only allows the unidentified substance use disorder to worsen in severity and complexity, but failure to address unhealthy substance use also can confound the diagnosis, treatment, and outcomes of these patients' other illnesses. If left untreated, patients with addiction will often over-utilize expensive health care services; therefore, physicians and others concerned about rising health care costs, should see the identification and management of addiction as a critical and integral part of national health care reform. This is not a minority opinion; prominent organizations such as the Institute of Medicine of the National Academies (IOM) have called for enhanced access to high quality, coordinated care for individuals with substance use disorders, with an especially expanded role for primary care (IOM, 1998IOM, 2005).

In a major step toward ensuring that addiction treatment utilizes a chronic care model, a workshop attended by 25 state representatives and other stakeholders was held to discuss adoption of the National Quality Forum (NQF) treatment standards (National Quality Forum, 2007) Adopting these standards, based in part on the IOM Report "Crossing the Quality Chasm" (IOM, 2001), and the NIDA Principles of Drug Addiction Treatment

(National Institute on Drug Abuse, 2009), could ultimately lead to implementation of a continuum of comprehensive services linked among various agencies, including mental and medical healthcare agencies and treatment providers.

We hope that in the year 2020, as we look back over the prior decade, we will be able to describe a truly integrated healthcare delivery system that provides prevention, screening, and early intervention for emerging unhealthy substance use, active primary treatment of mild to moderate substance use problems with brief therapies and medications offered within the context of primary care; and active, integrated specialty care treatment options provided with integrity and continuity to those with the most severe disorders. As we have told our addicted patients so often, we cannot simply "talk the talk" about a chronic care approach to substance user treatment—it is clearly time to "walk the walk."

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Biographies

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