

The Effectiveness of Treatment for Alcohol & Other Drug Use Disorders

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In the December 23, 2008 edition of the New York Times, there was an article titled, *States Demand More Evidence that Treatment Works*. The article was misleading in how it presented some of the main issues to drug addiction treatment and therefore requires some clarification.

To understand drug addiction in the 21st century, one must have the largest possible picture of the associated science, the facts which shape our perceptions, and the existing and emerging approaches to treatment.

In just the last ten years or so, advances in science have brought amazing insights to our understanding of drug addiction and subsequently to improving treatment effectiveness. Based on this research, scientific evidence has defined addiction as a chronic, and for many people, reoccurring disease characterized by compulsive drug seeking and use that results from prolonged effects of drugs on the brain (Dennis, 2007). A range of scientific studies has demonstrated that chronic drug use changes the brain in fundamental ways that exist long after drug use has stopped. By using advanced brain imaging technologies, we can see what we believe is the actual biological core of addiction.

However, addiction as a chronic, relapsing disease of the brain is a completely new concept for much of the general public, for many policymakers, and, sadly, for many health care professionals. The consequence of this enormous informational gap is a significant delay in gaining control over the drug abuse problem. For example, there is the tendency for people to see addiction as a social problem that should be dealt with by social solutions only, and particularly via the criminal justice system. However, science has demonstrated that drug addiction is as much a health problem as it is a social problem.

The implications are obvious. If we understand addiction as a chronic brain disease containing critical biological, behavioral, and social elements, our treatment strategies must therefore include biopsychosocial methods using the principles of chronic illness care. Not only must the underlying brain disease be treated, but the behavioral and social elements must also be addressed, as it is done with other brain diseases, including stroke, schizophrenia, and Alzheimer's disease (Leshner, 1999).

Alcohol and other drug use begins with an individual's conscious choice, but addiction is not simply a lot of alcohol and drug use. Research has provided overwhelming evidence that not only do alcohol and other drugs interfere with normal brain functioning by creating powerful feelings of pleasure, but they also have long-term effects on brain metabolism and activity.

The word "treatment" may be a misnomer as applied to addiction because it implies a one-time strategy to eliminate the adverse effects of a physiological condition. Like other chronic and potentially fatal conditions such as heart disease or diabetes, treatment of addiction actually refers to an extended process of diagnosis, treatment of acute symptoms, identification and management of circumstances that initially

may have promoted the alcohol and/or drug use, and development of life-long strategies to minimize the likelihood of ongoing use and its attendant consequences. In this context, treatment is best viewed as a continuum of different types and intensities of services over a long period of time. A phrase commonly used in the current treatment field is "sustained care recovery management," referring to the structured process of accessing and completing a range of services on the road to health and self-sufficiency.

Why does treatment seem so ineffective?

Historically, addiction treatment systems and research have been organized to provide and improve the outcomes of acute episodes of care. The conceptual model has been that an addicted person seeks treatment, completes an assessment, receives treatment, and is discharged, all in a period of weeks or months. This orientation stands at variance with clinical experience and studies conducted over several decades, which confirm that, although some individuals can be successfully treated within an acute care framework, more than half the patients entering publicly funded addiction programs require multiple episodes of treatment over several years to achieve and sustain recovery (Dennis, et al, 2005; Dennis, Foss, and Scott, 2007).

The progress of many patients is marked by cycles of recovery, relapse, and repeated treatments, often spanning many years before eventuating in stable recovery, permanent disability, or death (Anglin, et al, 2001; Hser, and Grella, 1997; Dennis, and Foss, 2005; Scott, Foss, and Dennis, 2005; McLellan, et al., 2000; Scott, Dennis, and Foss., 2005; Simpson, Joe, and Broome, 2002; Weisner et al., 2004; White, 1996).

The traditional acute care approach to drug abuse has encouraged people to suppose that patients entering addiction treatment should be cured and able to maintain lifelong abstinence following a single episode of specialized treatment. Accordingly, policymakers allocate limited public health dollars for addiction treatment; insurers restrict the number of patient days and visits covered; treatment centers make no infrastructure allowance for ongoing monitoring; and families and the public become impatient when patients relapse (McLellan et al, 2000). The mismatch between the typical natural history of substance use disorders and treatment models and expectations reduces the ability to help addicted individuals.

Effectiveness of Treatment

Research has shown that positive addiction-treatment outcomes should not be about abstinence alone, but should factor in a broad range of improvements in areas such as family life, employment, and decreased involvement with law enforcement and the justice system. And as such, addiction treatment should be held to the same standards of treatment success for other chronic diseases, such as diabetes, hypertension, and asthma, where relapse and noncompliance with therapy and medication are common (Dennis, et al, 2005; Dennis, Foss, Scott, 2007 and McLellan, 2000).

According to research, drug treatment reduces drug use by 40 to 60 percent and significantly decreases criminal activity during and after treatment by the same amount. Research shows that drug addiction treatment is also disease prevention. For example, treatment reduces the risk of HIV infection by six-fold and that interventions to prevent HIV are much less costly than treating HIV-related illnesses. Treatment also improves the prospects for employment, with gains of up to 40 percent after treatment, allowing for persons in recovery to be self supporting and not reliant on government welfare (NIDA, 2006).

The outcomes of any treatment are all the changes in patients' symptoms, behavior, and function that can reasonably be attributed to the treatment. When patients have achieved substantial reduction in their use of drugs, alcohol, or both, as well as improvement in several other important functional domains, this is termed *recovery*. Persons with substance use problems are said to be “in recovery” when they are not drinking/using *and* when they have a sound physical and mental health and are performing well in several other areas of their lives such as employment, family responsibility, and so forth.

Evidence Based Practices (EBPs)

In 2005, to help bridge the gap between research and practice, a federal initiative called the National Registry of Evidence-based Programs and Practices (NREPP) was created. NREPP is based on the premise that treatment will improve if confined to interventions for which a certain type of research evidence is available. While it is recognized that specific techniques have a greater likelihood to enhance treatment success, it is also critical to recognize that treatment is generally a multi-faceted process that includes a number of interventions, many of which are very individualized. Evidence-based practices (EBPs) are important modifications to treatment but must be recognized as a piece of a much larger scenario. On the down side, EBPs, while a noble intent, can often be based on incomplete science and imposed on an inadequate infrastructure. The point is, while treatment might be improved through EBPs, the effects may not be long lasting because treatment systems tend to lack continuing care.

The Need for Revised Systems of Care

Outcome studies on addiction treatment typically evaluate program success by looking at outcomes post-treatment when interventions have been discontinued. The problem with this approach is that treating the chronic nature of addiction with an acute care approach and then evaluating the effectiveness of the treatment can only lead to erroneous conclusions about outcomes and success. It wouldn't matter what type of treatment intervention or EBP was used because the system of care where the treatment was provided is often inadequate. What if heart disease, diabetes or asthma were subjected to the same treatment success evaluation methods? For example, what if treatment for diabetes stopped after the patient was stabilized and then someone evaluated the effectiveness and outcomes of the treatment some weeks or months later to see how well the patient sustained recovery without any type of ongoing or continuing care? Would this be realistic given what we know about diabetes? Does diabetes go away because of a treatment episode – evidence-based or not? Of course not. Chronic illnesses require some level of ongoing treatment to help sustain a healthy lifestyle.

Research on other chronic diseases does not look at outcomes post-treatment, but at the effect of ongoing treatment interventions like inhalers, antihypertensives, insulin, and diet and exercise regimens. Providers treating chronic hypertension, asthma, and diabetes take a *disease-management approach* to treatment, which is also the basis upon which researchers measure treatment success (McLellan et al, 2003)

A disease-management model for addiction treatment requires that patient's progress be measured in predefined steps, and that relapse would result in an intermediate step back, not failure of the treatment effort or a conclusion that the intervention was necessarily unsuccessful (Compton et al, 2003).

Is Addiction Treatment Worth Its Cost?

Drug addiction treatment is cost-effective in reducing drug use and its associated health and social costs (NIDA, 2004). Treatment is less expensive than alternatives, such as not treating addicts or simply incarcerating addicts.

According to several conservative estimates, every \$1 invested in addiction treatment programs yields a return of between \$4 and \$7 in reduced drug-related crime, criminal justice costs, and theft alone. When savings related to health care are included, total savings can exceed costs by a ratio of 12 to 1. Major savings to the individual and society also come from significant drops in interpersonal conflicts, improvements in workplace productivity, and reductions in drug-related accidents.

Costs of Treatment

While the costs of treating addiction may be \$20 billion annually, how is this compared to the treatment costs for other chronic relapsing illnesses such as diabetes, asthma, depression and schizophrenia and, how do these costs compare with addictions treatment? Annual treatment costs for the following conditions are:

- Diabetes: \$80 billion
- Asthma: \$6 billion
- Depression: \$43.7 billion
- Schizophrenia: \$32.5 billion
- Bipolar Disorder: \$45 billion

More important than the costs of treating chronic illnesses are the spending costs on not treating these illnesses. It is estimated that untreated mental illness is in excess of \$300 billion a year and untreated drug addiction has been estimated to be over \$181 billion annually.

The real challenge then is not so much in building a bridge between evidence-based practices to the individual provider (although important), but moreover to re-engineer the system of care where the treatment interventions, including EBPs, take place. Following similar principles that medicine has demonstrated over the last several years for the improvement of chronic illness care, addiction treatment systems can also realize increased successes, facilitate longer periods of symptoms-free lifestyle in patients with an overall improved quality of life, and experience significant reductions in avoidable treatment costs for readmissions and relapses. States, policy makers, and funders would do more to improve on addiction treatment outcomes by holding systems of care accountable for bringing science into practice.

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