

White, W. & McLellan, A.T. (2008). Addiction as a chronic disease: Key messages for clients, families and referral sources. *Counselor*, 9(3), 24-33.

Addiction as a Chronic Disorder: Key Messages for Clients, Families and Referral Sources

William L. White, MA and A. Thomas McLellan, PhD

Modern medicine has recognized that chronic diseases cannot and should not be treated and managed like acute disorders.

Acute disorders such as bacterial infections, broken bones and even emotional trauma from shock or injury, can typically be traced to a clearly identifiable source (e.g., an infectious agent, physical trauma) and can be “cured” through treatment and recovery processes that span a relatively short period of time. The onset, course and resolution of acute disorders may be intense and disruptive, but they generally leave no lasting mark on one’s identity or functional capabilities. The treatment process essentially returns the body to its original state - the treated individual is no more (or less) susceptible to a return of the disease or condition than an individual who never had the disease. Thus, while a treated individual may again break a bone or get another infection - this is considered a new occurrence and not a relapse.

In contrast, chronic diseases such as diabetes, asthma or heart disease spring from and are complicated by, multiple biological, psychological and social factors - some of which cannot be clearly identified. Many times “lifestyle” or personal behavioral choices are intimately involved in the onset and course of these disorders. While there are usually several potentially effective treatments for chronic disorders, they are of necessity more complex and protracted than acute treatments and they do not produce the same kinds of outcomes as acute treatments.

All chronic treatments, regardless of disease, share three important features. First, they can usually remove or reduce the symptoms of the disease - but cannot affect the root causes of the disease. For example, beta blockers reduce blood pressure and insulin improves the body’s ability to digest sugars and starches - as long as the affected individual continues the treatment. However, these treatments do not return the affected individual to normal.

The second feature associated with all chronic treatments is that they require significant changes in lifestyle and behavior on the part of the patient

to maximize their benefit. Again, even if individuals with diabetes regularly takes their insulin as prescribed, this will not stop disease progression if they do not also reduce sugar and starch intake, increase exercise and reduce stress levels.

The third feature derives from the first two. Because of the complexity of factors that can lead to a chronic illness and because of the need for ongoing medical care and lifestyle change, it should not be surprising that relapses are very likely to occur in all chronic illnesses. For these reasons, most contemporary treatment strategies in chronic illness involve regular in-person and/or telephone monitoring of medication adherence; coupled with encouragement and support for pro-health changes in diet, exercise and stress levels. Increasingly, family members are being trained to also provide continuing monitoring and support for the behavioral changes necessary to maintain symptom remission and sustain good quality of life. .

As is evident from this short preface, the onset and course of chronic illnesses are not like those of acute illnesses; and for these reasons chronic care has to be quite different from acute care. While many in our field have come to consider some (not all) forms of addiction as chronic - this change in thinking has not been followed by changes in treatment strategy, monitoring methods, insurance coverage or outcome expectations. With this as background, the current article: 1) summarizes the history of the conceptualization of severe alcohol and other drug dependence as a chronic disease, 2) updates the scientific evidence comparing alcohol and drug dependence to diabetes mellitus, hypertension and asthma, and 3) identifies the central messages that addiction professionals can communicate to clients, families and referral sources regarding addiction treatment and long-term recovery management strategies.

Historical Background

The earliest conceptualizations of chronic drunkenness as a medical condition by Drs. Benjamin Rush and Thomas Trotter were followed by more substantive treatises by Drs. M. Huss, W. Marcet, T.D. Crothers and others, all of whom noted the prolonged course of alcohol dependence and the professional challenges involved in its treatment. The origins of terms such as *habituation*, *inebriety*, *dipsomania*, *alcoholism* and *addiction* were rooted in efforts to convey a condition far more complex and enduring than the threat posed by an episode of acute alcohol or other drug intoxication. The recognition of the chronicity and complexity of severe alcohol and other

drug problems led to the calls for special institutions for the care of the inebriate (Woodward, 1838) and the subsequent birth of inebriate homes, inebriate asylums and private addiction cure institutes (White, 1998).

There were several early pioneers who suggested that the treatment of addiction should mirror the treatment of other chronic diseases. In 1828, Dr. J.H. Kain penned an essay on the treatment of intemperance in which he invoked the medical maxim, “chronic diseases require chronic cures” (p. 295). Dr. T.D. Crothers expressed similar sentiments in an 1879 editorial in the *Journal of Inebriety*:

The permanent cure of inebriates under treatment in asylums will compare favorably in numbers with that of any other disease of the nervous system which is more or less chronic before the treatment is commenced. (p.249)

Such comparisons of addiction to other chronic disorders were lost in the larger collapse of the inebriate asylum movement in the opening decades of the twentieth century.

As interest in alcoholism as a public health problem arose again in the mid-twentieth century, alcoholism was again compared to other chronic diseases. A 1938 report of the Scientific Committee of the Research Council on Problems of Alcohol concluded, “An alcoholic should be regarded as a sick person, just as one who is suffering from tuberculosis, cancer, heart disease, or other serious chronic disorder” (Johnson, 1973, p. 244). Also worthy of note is a 1947 article by Dr. R.E. Duncan published in the *Kansas City Medical Journal*. Duncan declared that alcoholism is a “chronic affair” and that “chronic conditions must be approached on a long range basis.” He further concluded, “to foster complete recovery, treatment must be continued for years after the patient has been sobered” (pp.11-12). Duncan was one of the first practitioners to explore the full clinical implications of the chronicity of addiction. During this same period, Charles Franco, an early industrial alcoholism pioneer, wrote a 1951 article “Chronic Alcoholism as a Medical Problem in Industry.” He called for recognizing alcoholism “as much a disease as diabetes or tuberculosis.” (Duncan, 1951, p. 48)

One other important historical footnote from the mid-twentieth century was the 1942 publication of Howard Haggard and E.M. Jellinek’s *Alcohol Explored*. In this text, which was overshadowed by Jellinek’s later book *The Disease Concept of Alcoholism* (1960), Haggard and Jellinek suggest that “The progress of research has been impeded by two conceptions: the first that all habitual excessive drinking is a disease, and the

second that it is the same disease” (p.143). This statement anticipated much of the later debate over the question of whether alcoholism is a disease and whether all alcohol problems can comfortably fit within a “disease” or “chronic disease” rubric. Our focus in this article is not on what addiction is—a disease, illness, disorder, habit, problem, etc.—but on the temporal course of addiction and how the span of the disorder from onset through sustained recovery can be most effectively managed at personal and professional levels.

Treatment in an Acute Care Model

The emphasis on alcoholism as a chronic disease was lost in the larger battle to convey to the American public and policy makers that alcoholism was a disease (Mann, 1944). This effort spanned the 1940s-1960s and led to landmark legislation in 1970 that set the stage for the rise of community-based, time-limited addiction treatment in the United States. This was followed by a rapid process of professionalization and commercialization and subsequent emergence of an aggressive system of managed behavioral health care in the U.S. Despite (or perhaps because of) these forces, nearly all modalities of addiction treatment migrated toward an acute care (AC) model of intervention--even traditionally long-term modalities such as therapeutic communities and methadone maintenance.

The AC model is characterized by the following central elements:

- Services are delivered “programmatically” in a uniform series of encapsulated activities (screening, admission, a single point-in-time assessment, treatment procedures, discharge, and brief “aftercare” followed by termination of the service relationship).
- A professional expert directs and dominates the assessment, treatment planning and service delivery decision-making throughout this process
- Services transpire over a short (and historically ever-shorter) period of time -usually as a function of a pre-arranged, time-limited insurance payments designed specifically for addiction disorders and “carved out” from general medical insurance..
- The individual/family/community is given the impression at discharge (“graduation”) that “cure has occurred:” long-term recovery is now self-sustainable without on-going professional assistance.

- Post-treatment relapse and re-admissions are viewed as the failure (non-compliance) of the individual rather than potential flaws in the design or execution of the treatment protocol.

By the later 1990s, the assumptions of the AC model began to be questioned (O'Brien & McLellan, 1996; Hser, Anglin, Grella, et al, 1997; Stout, Rubin, Zwick, et al, 1999). These early critiques were followed by widespread calls to extend the design of addiction treatment from an AC model to a model of sustained recovery management (McLellan, Lewis, O'Brien, & Kleber, 2000; White, Boyle, & Loveland, 2002; Godley, Godley, Dennis, et al, 2002; Dennis, Scott & Funk, 2003; Compton, Glantz, & Delaney, 2003; White, 2005; McKay, 2005; Dennis, Scott, Funk, & Foss, 2005; Scott, Dennis, & Foss, 2005; Flaherty, 2006; Dennis & Scott, 2007). One call to redesign addiction treatment was the publication of "Drug Dependence, a Chronic Medical Illness" in the *Journal of the American Medical Association* (McLellan, Lewis, O'Brien & Kleber, 2000). In the next section, we will summarize and update the major findings of this seminal article.

Addiction as a Chronic Medical Illness

It is important to state at the outset that not all alcohol- and drug-related (AOD) problems inevitably become chronic disorders; and that clinical research has not yet been able to clearly predict which early cases will ultimately become chronic. Many substance use problems are developmental and as such are often outgrown in the successful transition from adolescence into adulthood. Others occur in tandem with major life transitions (e.g., death of a loved one, divorce, job loss) and are resolved by time, natural support, brief professional intervention or peer-based intervention by others in recovery (Burman, 1997; Granfield & Cloud, 1999, Bien, Miller & Tonigan, 1993; Bernstein, Bernstein, Tassiopoulos, et al, 2005). Similarly, many of those who experience a period of high blood pressure will essentially get over this problem through change of lifestyle, loss of weight and increased physical activity. It is not currently possible to predict who will go on to develop chronic hypertension.

For many reasons, most of those entering addiction treatment are characterized by greater personal vulnerability for AOD problems (e.g., family history of AOD problems, early onset of AOD use, traumatic victimization), greater problem severity (e.g. substance dependence), greater problem complexity (e.g., concurrent medical/psychiatric illness, multiple

drug use), and fewer personal and family resources to initiate and sustain a long-term recovery process (Bischof, Rumpf, Myer, et al, 2004; Granfield & Cloud, 1999). There are striking similarities between substance dependence as seen in the clinical setting and other chronic illnesses such as 2 diabetes mellitus, hypertension and asthma (McLellan, Lewis, O'Brien & Kleber, 2000). Severe substance dependence and these other primary chronic illnesses:

- Are influenced by genetic heritability and other personal, family and environmental risk factors.
- Can be identified and diagnosed using well-validated screening questionnaires and diagnostic checklists.
- Are influenced by behaviors that begin as voluntary choices but evolve into deeply ingrained patterns of behavior that, in the case of addiction, are further exacerbated by neurobiological changes in the brain that weaken volitional control over these contributing behaviors..
- Are marked by a pattern of onset that may be sudden or gradual.
- Have a prolonged course that varies from person to person in intensity and pattern.
- Are accompanied by risks of profound pathophysiology, disability and premature death.
- Have effective treatments, self-management protocols, peer support frameworks and similar remission rates, but no known cures.

These similarities between serious substance dependence and other chronic illnesses are striking. It is important to note that even substantial similarity does not mean that similar disease processes are at work across these conditions. However, at the very least, the similarities argue for consideration of the same kinds of chronic or continuing care strategies for alcohol and drug dependence that have been employed in other chronic diseases. If substance dependence *is like other chronic illnesses*, then this raises two important implications: 1) acute care models of intervention for severe substance dependence may reduce substance use temporarily but those reductions are not likely to sustain once care stops; and 2) methods used in the treatment of other chronic illnesses might be effectively adapted to enhance long-term recovery from substance dependence. These

implications offer an explanation of the generally high and rapid rates of relapse following cessation of most available addiction treatments (McLellan et al., 2000): there is simply no quick fix for the most severe forms of this disorder.

Changes in Service Infrastructure and Practices

Recent years have been marked by pilot efforts to move addiction treatment beyond the acute biopsychosocial stabilization and patient education toward the goal of long-term recovery as measured by stable sobriety, global (physical, emotional, relational, spiritual) health and citizenship (Betty Ford Institute Consensus Panel, 2007). Efforts to create “recovery-oriented systems of care” are underway at national, state and local levels (Clark, 2007; Kirk, 2007; Evans, 2007).

However, it should be obvious at this point that elevating long-term recovery rates for severe substance dependence will require fundamental changes in the national, state and local infrastructure of addiction treatment as well as changes in front-line service practices (Roman & Johnson, 2002; D’Aunno et al., 1998; McLellan, Carise & Kleber, 2003) and service relationships (McLellan et al., 2005). Table 1 illustrates the direction of desired infrastructure changes that addiction professionals can anticipate if the field can muster the collective will and resources to affect such changes.

Table 1: Infrastructure Changes Required for Shift toward Recovery Management

Element of Service Infrastructure	Change Required
<i>Operational Stability, Leadership Development & Succession Planning</i>	Increased continuity of ownership & leadership of addiction treatment programs; a new generation of leaders committed to recovery-focused system transformation, replacement of the current mass exodus of long-tenured leaders at all levels and across all roles in the field.
<i>Institutional Mission, Core Values & Service Philosophy</i>	Shift in focus from acute stabilization to long-term individual (and ideally) family recovery; articulation of core recovery values that will drive system transformation processes; integration of clinical models of intervention with public health and community development models that seek to alter the

	community recovery environment.
<i>Policy-making Processes</i>	Diverse representation of people (individuals/families) in recovery at all levels of system decision-making.
<i>Service Integration / Holistic Care</i>	Development of multi-agency, interdisciplinary, cross-trained teams and integrated funding streams. Integration of primary medical and psychiatric care within specialized addiction treatment settings - and vice versa.
<i>Funding Philosophies and Mechanisms</i>	Shift by government and private sources from purchasing time, or session-limited units of service - to purchasing an integrated program of management and support for long-term recovery; shift in emphasis from treatment intensity (crisis stabilization) to treatment extensity (prolonged recovery maintenance)
<i>Regulatory Standards and Monitoring Protocol</i>	Integration of chronic care principles into monitoring standards; shift from focus on program policy development and procedural efficiency to intermediate and distal recovery outcomes.
<i>Workforce Preparation & Stabilization</i>	Greater emphasis on recovery principles and processes in preparatory education and training; new training programs for peer-based recovery support specialists (e.g., recovery coaches); initiatives seeking to lower turnover of service personnel to achieve continuity of contact in recovery support relationships.
<i>System Relationships</i>	Shift from paternalism to partnership—from hierarchical control to reciprocal respect.
<i>Information Technology</i>	Computer-based clinical management information systems capable of evaluating individual, unit and organizational performance based on key recovery indicators.
<i>Evaluation & Research</i>	All treatment providers will monitor and report aggregate recovery outcome data at regular intervals for all those receiving care; funding of state and national recovery research agendas, e.g., detailed recovery prevalence data, documentation of long-term pathways and styles of recovery.

In the shift from an acute care to recovery management model, changes in local programmatic and service practices will be required in several critical areas. These changes will focus on such treatment system performance indicators as the following (White, Boyle, Loveland, 2003; Evans, 2007; White, in press):

- Attraction: identifying and engaging individuals and families at an earlier stage of AOD problem development (e.g., via assertive community education, screening and outreach programs)
- Engagement: enhancing access, therapeutic alliance, and retention (e.g., expedited service initiation, focus on relationship-building and regular re-motivation, altered policies related to administrative discharge)
- Assessment: developing assessment protocols that are global, family-centered, strengths-based and continual.
- Service Planning: transitioning from professional-developed treatment plans to client-directed recovery plans.
- Service Menu: Focusing on service elements that have measurable effects on recovery outcomes; expanding the service menu to include non-clinical, peer-based recovery support services.
- Service Duration: Shifting from “emergency room” models that emphasize brief, crisis-oriented services to “recovery models” that emphasizes long-term, lower intensity recovery maintenance services.
- Service Location: Extending the reach of services from the institutional environment to the natural environments of individuals and families, e.g., expansion of neighborhood-based, work-based and home-based services.
- Service Relationship: Shifting from a professional expert model to a long-term recovery partnership/consultant model; philosophy of choice for individuals and families.
- Continuing Care: Shifting from “aftercare” as an unfunded afterthought to assertive models of continuing care for all clients (regardless of discharge status), e.g., post-treatment monitoring, stage-appropriate recovery education and coaching, personal linkage to communities of recovery and, when needed, early re-intervention. Expanded use of cell phones and Internet for long-term monitoring and support.
- Relationship to the Community: Increasing utilization of indigenous recovery support resources in the community, e.g., recovery support groups, recovery community organizations (e.g., recovery support

Communicating about Addiction as a Chronic Disease

Many communications about addiction and especially communications comparing it to other chronic illnesses can arouse strong feelings and unintended, harmful implications. Because of the significant family and social problems associated with addictive disorders, strong feelings are aroused when these conditions are discussed as “illnesses” or “chronic diseases.” To many in the public at large this represents inappropriate “medicalization;” abrogation of personal responsibility for those affected; and a ready-made excuse for ineffective treatment for the treatment field. Perhaps worse, many individuals with substance use disorders who have gained and maintained recovery may resent the idea that they have a “continuing chronic illness.”

Thus, care must be taken in how the chronic nature of addiction is communicated to the policy makers and the public, clients, family members, referral sources and to those working on the front lines of addiction treatment. In the service of better communication we first discuss what this concept of addiction as a chronic illness does NOT imply; followed by ten concepts and correlates that may be helpful in thinking about and discussing appropriate and effective continuing care for chronic forms of this illness.

Things NOT Implied or Suggested by the Concept of Addiction as a Chronic Illness

- All AOD problems are NOT chronic, most do NOT have a prolonged and progressive course - some do and research is needed to identify early signs of chronic progression.
- All persons with AOD problems do NOT need specialized, professional, long-term monitoring and support - many recover on their own, with family or peer support; again research is needed to identify who is most likely to need intensive, professional care.
- Among those who do need treatment, relapse is NOT inevitable and all persons suffering from substance dependence do NOT require multiple treatments before they achieve stable, long-term recovery.
- Even among those who do relapse following treatment, families, friends, and employers should NOT abandon hope for recovery. (Community studies of recovery from alcohol dependence report long-term recovery rates approaching or exceeding 50% Dawson, Grant, Stinson, et. al., 2005).

- Having the serious chronic illness of addiction, DOES NOT reduce personal responsibility for continuous efforts to manage that illness - just as those with serious diabetes or hypertensive disease must also manage their illnesses.
- Appropriate treatment for chronic addiction is NOT simply a succession of short term detoxifications or treatment stays. Appropriate continuing care requires personal commitment to long term change, dedication to self management, community and family support and monitoring.
- Current addiction treatment outcomes are NOT acceptable simply because they are comparable to those achieved with other chronic disorders.

Things that ARE Important In Considering the Concept of Addiction as a Chronic Illness

- Chronic Diseases Vary. Not everyone at risk for a chronic disease contracts the disease or experiences the same course of the disease. Chronic diseases exhibit a high degree of variability in pattern of onset, course and intensity (self-accelerating, constant, alternating cycles of remission and relapse, or decelerating). Each case of chronic disease varies in physiological severity, functional impairment, and the financial/emotional burden placed on the individual, family and society (Stein, et al, 1987). The course of chronic disorders is influenced by the interaction of such factors as type and degree of biological vulnerability, age of onset, problem severity, problem complexity (e.g., presence of co-occurring disorders) and degree of individual, family and community *recovery capital* (assets that can be drawn upon to initiate and sustain recovery) (Granfield & Cloud, 1999). Adding to the burden of chronic disorders is their propensity to beget other acute and chronic disorders such as depression and chronic pain.
- Chronic diseases require prolonged and active management. Chronic disorders require strategic, sustained stewardship of personal, family and community resources. Core strategies for achieving long-term recovery from chronic disorders include stabilization of active episodes, global assessment, enhancement of global health, sustained professional monitoring and early re-intervention, continuity of contact in a primary recovery support relationship, and development

- Both full and partial recoveries are possible. There are permanent solutions to severe alcohol and other drug problems. Millions of individuals and families throughout the world live full lives in long-term recovery from these problems. Their increasingly public stories, even more than the accumulation of scientific studies, offer living proof of this proposition. Partial recoveries are also possible. An essential strategy of chronic disease management is optimizing personal functioning and quality of life even after abstinence has been achieved. Recovery management strategies for persons with the most severe and persistent disorders include multiple goals: reducing the number, intensity, and duration of relapse episodes; strengthening and extending the length of remission periods; reducing the personal and social costs associated with relapse; reducing the propensity for drug substitution and other excessive behaviors during early periods of recovery initiation; and enhancing the quality of personal/family life through both the remission and relapse phases of the disorder. Partial recovery may constitute a prelude to resumed substance dependence, a permanent state, or a stage of ambivalence and instability that precedes the achievement of full recovery.
- Recovery processes vary. There are multiple pathways, patterns and personal styles of long-term recovery (White & Kurtz, 2006). The time and resources required to fully resolve alcohol and other drug problems vary from individual to individual. Greater time and resources are often required as substance use disorders become more severe and complex and as a personal, family and community recovery capital diminish. Beyond this general guideline, there is no way to predict who will sustain recovery following a single effort, who will achieve recovery after multiple efforts or who will fail to achieve recovery.
- Lapses after recovery initiation are common but not inevitable. A lapse (episode of alcohol or drug use) or relapse (resumption of compulsive use and its related problems) following treatment does not mean that there is no hope for recovery. A significant portion of

- Natural support matters. The prospects of long-term recovery for individuals are enhanced by sustained family and social support. Family members and friends can take concerted action to shorten a loved one's addiction career (the span of time from problem onset to stable recovery maintenance) and to enhance the health of all family members and the family unit.
- Intervening early makes a difference. Recognizing and intervening in the alcohol and other drug problems of a family member can shorten his or her addiction career. There are brief windows of opportunity within the course of addiction that can be capitalized upon to help initiate and solidify long-term recovery.
- Personal and family recovery take time. Some of the personal/family problems that preceded or that developed after the onset of alcohol and other drug problems continue into the early years of recovery. The resolution of these problems requires time, sustained effort, and, quite often, professional help.
- Professional and peer support helps. Individual and family recoveries are enhanced by sustained professional and peer support. Monitoring the status of a chronic disease, the effectiveness of the efforts to manage it, and changing physical, psychological, behavioral and environmental risk factors are crucial elements in chronic disease management. Sustained participation in peer-based recovery support groups and other recovery community institutions (e.g., recovery homes, recovery schools, recovery ministries) can elevate long-term recovery rates. Primary physicians, addiction professionals and other frontline health care providers constitute an important resource for long-term recovery check-ups and support.
- Recovery is a marathon that can bring unexpected gifts. Recovery from severe alcohol and other drug problems, like recovery from other primary health problems such as diabetes, asthma or heart disease,

A Historical Opportunity

Re-engineering addiction treatment into a system of sustained recovery support will be both a major challenge and an important opportunity for society. We invite those on the frontlines of addiction treatment to join us in writing this new future for addiction recovery in America.

About the Authors: William White is a Senior Research Consultant at Chestnut Health Systems and author of *Slaying the Dragon: The History of Addiction Treatment and Recovery in America*. Both of the authors are vocal advocates of understanding and treating addiction as a chronic illness. A. Thomas McLellan, Ph.D., is a professor of psychiatry at the University of Pennsylvania, and founder and Executive Director of the Treatment Research Institute, a not-for-profit research and evaluation institute in Philadelphia.

References

- The Betty Ford Institute Consensus Panel (2007). What is recovery? A working definition from the Betty Ford Institute. *Journal of Substance Abuse Treatment*, 33, 221-228.
- Bernstein, J., Bernstein, E., Tassiopoulos, K., Hereen, T., Levenson, S. & Hingson, R. (2005). Brief motivational intervention at a clinic visit reduces cocaine and heroin use. *Drug and Alcohol Dependence*, 77, 49-59.
- Bien, T., Miller, W., & Tonigan, J. (1993). Brief intervention for alcohol problems: A review. *Addiction*, 88(3), 315-336.
- Bischof, G., Rumpf, H., Myer, C., Hapke, U. & John, U. (2004). What triggers remission without formal help from alcohol dependence? Findings from the TACOS-Study. In: Rosenqvist P; Blomqvist J; Koski-Jannes A; Ojesjo L, eds. *Addiction and Life Course. NAD Monograph No. 44*. Helsinki Finland: Nordic Council for Alcohol and Drug Research, pp. 85-101.

- Burman, S. (1997). The challenge of sobriety: Natural recovery without treatment and self-help programs. *Journal of Substance Abuse*, 9, 41-61.
- Clark, W. (2007). Recovery as an organizing concept. Accessed June 26, 2007 at <http://www.glattc.org/Interview%20With%20H.%20Westley%20Clark,%20MD,%20JD,%20MPH,%20CAS,%20FASAM.pdf>.
- Compton, W.M., Glantz, M. & Delaney, P. (2003) Addiction as a chronic illness—putting the concept into action. *Evaluation and Program Planning*, 26, 353-354.
- Crothers, T.D. (1879) Editorial: Practical value of inebriate asylums. *Journal of Inebriety* 3(4):249.
- D'Aunno, T. (2006). The role of organization and management in substance abuse treatment: Review and roadmap. *Journal of Substance Abuse Treatment*, 31, 221-233.
- Dawson, D.A., Grant, B.F., Stinson, F.S., Chou, P.S., Huang, B., Ruan, J. (2005). Recovery from DSM-IV alcohol dependence: United States, 2001-2002. *Addiction*, 1, 281-292.
- Dennis, M. L., & Scott, C. K. (2007). Managing Addiction as a Chronic Condition. *NIDA Science and Practice Perspectives*, 4(1), 45-55
- Dennis, M. L., Scott, C. K., & Funk, R. (2003). An experimental evaluation of recovery management checkups (RMC) for people with chronic substance use disorders. *Evaluation and Program Planning*, 26(3), 339-352.
- Dennis, M.L., Scott, C.K., Funk, R., & Foss, M.A. (2005). The duration and correlates of addiction and treatment careers. *Journal of Substance Abuse Treatment*, 28, S51-S62.
- Duncan, R.E. (1947). Alcohol as a medical problem. *Kansas City Medical Journal* 23(6):9-12.
- Duncan, S.C. (1951). Chronic alcoholism as a medical problem in industry. *Ind Med Surg.*, 20(12), 47-50.
- Evans, A. (2007). The recovery-focused transformation of an urban behavioral health care system. Accessed June 26, 2007 at <http://www.glattc.org/Interview%20With%20Arthur%20C.%20Evans,%20PhD.pdf>.
- Flaherty, M. (2006). *Special Report: A Unified Vision for the Prevention and Management of Substance Use Disorders: Building Resiliency, Wellness and Recovery—A Shift from an Acute Care to a Sustained Care Recovery Management Model*. Pittsburgh: Institute for Research, Education and Training in Addictions.

- Godley, M., Godley, S., Dennis, M., Funk, R., & Passetti, L. (2002). Preliminary outcomes from the assertive continuing care experiment for adolescents discharged from residential treatment. *Journal of Substance Abuse Treatment, 23*, 21-32.
- Granfield, R., & Cloud, W. (1999). *Coming clean: Overcoming addiction without treatment*. New York, NY: New York University Press.
- Haggard, H. W. & Jellinek, E.M. (1942). *Alcohol Explored*, Garden City, NY: Doubleday, Doran & Company, Inc.
- Hser, Y., Anglin, M., Grella, C., Longshore, D., & Prendergast, M. (1997). Drug treatment careers: A conceptual framework and existing research findings. *Journal of Substance Abuse Treatment, 14*(3), 1-16.
- Jellinek, E.M. (1960). *The Disease Concept of Alcoholism*. Highland Park, New Jersey: Hillhouse.
- Johnson, B. (1973). *The Alcoholism Movement in America: A Study in Cultural Innovation*. Urbana, Illinois: University of Illinois Ph.D. Dissertation.
- Kain, J.H. (1828) On intemperance considered as a disease and susceptible of cure. *American Journal of Medical Science, 2*, 291-295.
- Kirk, T. (2007). Creating a recovery-oriented system of care. Accessed June 26, 2007 at <http://www.glatc.org/Interview%20With%20Thomas%20A.%20Kirk,%20Jr.,%20PhD.pdf>.
- Mann, M. (1944). Formation of a National Committee for Education on Alcoholism *Quarterly Journal of Studies on Alcohol, 5*(2):354.
- Marcet, W. (1868) *On Chronic Alcoholic Intoxication*. New York: Moorhead, Simpson, & Bond, Publishers.
- McKay, J. R. (2005). Is there a case for extended interventions for alcohol and drug use disorders? *Addiction, 100*(11), 1594-1610.
- McLellan, A.T., Carise, D. & Kleber, H.D. (2003). Can the national addiction treatment infrastructure support the public's demand for quality care? *Journal of Substance Abuse Treatment, 25*, 117-121.
- McLellan, A.T., Lewis, D.C., O'Brien, C.P, & Kleber, H.D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *Journal of the American Medical Association, 284*(13), 1689-1695.
- McLellan, A.T., McKay, J.R., Forman, R., Cacciola, J., & Kemp, J. (2005). Reconsidering the evaluation of addiction treatment: From retrospective follow-up to concurrent recovery monitoring. *Addiction, 100*, 447-458.

- O'Brien, C. & McLellan, T. (1996). Myths about the treatment of addiction. *Lancet*, 347:237-240.
- Roman, P.M. & Johnson, J.A. (2002). Adoption and implementation of new technologies in substance abuse treatment. *Journal of Substance Abuse Treatment*, 22, 211-218.
- Scott, C.K., Dennis, M.L., & Foss, M.A. (2005). Utilizing recovery management checkups to shorten the cycle of relapse, treatment reentry, and recovery. *Drug and Alcohol Dependence*, 78, 325-338.
- Stein, R.; Bauman, L.; Westbrook, L.; Coupney, S; and Ireys, H. (1997). Framework for identifying children who have chronic conditions: The case for a new definition. *The Journal of Pediatrics*, 122(3):342-347.
- Stout, R. L., Rubin, A., Zwick, W., Zywiak, W., & Bellino, L. (1999). Optimizing the cost-effectiveness of alcohol treatment: A rationale for extended case monitoring. *Addictive Behaviors*, 24(1), 17-35.
- Trotter, T. (1804) *Essay, Medical Philosophical, and Chemical, on Drunkenness and its Effects on the Human Body*. London: Longman, Hurst, Rees, and Orme.
- White, W. (in press). Non-clinical addiction recovery support services: History, rationale, models, potentials and pitfalls. *Alcoholism Treatment Quarterly*.
- White, W. (2005). Recovery Management: What if we really believed addiction was a chronic disorder? *GLATTC Bulletin*. Chicago, IL: Great Lakes Addiction Technology Transfer Center, September, pp. 1-7.
- White, W. (1998). *Slaying the Dragon: The History of Addiction Treatment and Recovery in America*. Bloomington, IL: Chestnut Health Systems.
- White, W., Boyle, M., & Loveland, D. (2002). Alcoholism/addiction as a chronic disease: From rhetoric to clinical application. *Alcoholism Treatment Quarterly*, 20(3/4), 107-130.
- White, W. & Kurtz, E. (2006). The varieties of recovery experience. *International Journal of Self Help and Self Care*, 3(1-2), 21-61.
- Woodward, S. (1838). *Essays on asylums for inebriates*. Worcester, Massachusetts.