

THE LIBRARY OF ADDICTIVE DRUGS

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ITS HISTORY, PHARMACOLOGY, AND TREATMENT

MARK EDMUND ROSE, M.A. | CHERYL J. CHERPITEL, DR.P.H.



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A funny thing happened along the way as I [Mark Rose] was preparing to enter treatment for drug and alcohol dependence. It was June 1983, and my grade point average at UC Santa Barbara had just slid below 2.0. I returned home for the summer and had several meetings with concerned professionals, which had been arranged by my parents. I agreed to go into treatment after finishing a summer class at UC San Diego, where an “A” would get me out of academic probation. Concluding that psychopharmacology was my best shot, I enrolled in a course taught by an unknown, entry-level instructor named George Koob, Ph.D. (now one of the top addiction scientists in the world). I became fascinated with learning about how therapeutic and recreational drugs acted on the brain to produce their effects, and I frequently visited with Dr. Koob. I took the final exam, entered treatment the next day, and got my “A.”

I would sincerely like to thank Dr. Koob for igniting a passion; my former boss Mark Willenbring, M.D.; undergraduate mentor Harry Hoberman, Ph.D.; supervisor Warren Maas, L.P., J.D.; and friend Aviel Goodman, M.D., for their hugely influential role in helping me define and shape my professional interests and direction.

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INTRODUCTION

Alcohol is unique among recreational drugs. On one hand, many people enjoy drinking alcohol and are able to do so without harming themselves or others. On the other hand, 15% of all persons who drink alcohol will develop an addiction to alcohol (also called alcoholism or alcohol dependence) (Anthony et al. 1994; Chen and Anthony 2004; Hughes et al. 2006).

The U.S. government estimates that 104 million adults in the U.S. are regular drinkers and that 18.2 million people currently have a diagnosable alcohol use disorder, which includes alcohol abuse and alcohol dependence (Centers for Disease Control and Prevention 2010; Hasin et al. 2007). Almost every American is affected by alcoholism. More than half of all adults have a family history of problem drinking or alcoholism, and families, communities, and society as a whole are enormously impacted (Centers for Disease Control and Prevention 2010; Hasin et al. 2007).

Alcohol abuse and alcoholism cost the U.S. economy approximately \$235 billion each year (Thavorncharoensap et al. 2009), accounted for by alcohol-related accidents and injury, property destruction, and violent crime; illness, disease, and premature death; and worker impairment that results in elevated costs to the health care, criminal justice, and social service systems, and in lost worker productivity and industrial output. The emotional cost to the alcoholic, the family, the loved ones, and the innocent victims of alcohol-related physical and sexual assault, motor vehicle accidents, and ruined relationships cannot be calculated.

Fortunately, the last ten years have seen enormous advances in the understanding of alcoholism and its treatment. With tremendous scientific leaps in investigating and understanding the biological basis of alcoholism, the effectiveness of existing treatments, and the future direction of treatment development all may further improve treatment outcomes. Research has identified the drinking patterns among nonalcoholics that place them at highest risk for accidents, injuries, and medical problems. This information is already being used in prevention and risk-reduction efforts.

Much of the research addressed in this book has been funded by the U.S. government through the National Institute on Alcohol Abuse and Alcoholism (NIAAA), which is the branch of the National Institutes of Health (NIH) that addresses alcohol problems and alcoholism.

This book provides detailed, current information on the most important aspects of alcohol use, alcoholism, and its treatment. Preparation of this book involved an exhaustive review of the most recent research in areas of alcoholism important to professionals, students, alcoholics in recovery, concerned family members and loved ones of the alcoholic, and to anyone with an interest in the subject matter. Although some of the concepts are complex, we have made every effort to keep the material accessible and easy to understand for readers unfamiliar with addiction, while keeping it interesting and relevant for students and professionals in the field. Following is a chapter-by-chapter overview of the major topics covered in this book.

The historical background of alcohol use, alcohol problems, and treatment in the United States is examined in chapter 1. The chapter provides a context for understanding the origin of current treatment approaches and of the cyclical nature of attitudes toward alcoholics and alcohol problems. Many elements of the current understanding of alcoholism and addiction actually originated in the late 1800s, when the core features of alcoholism such as the genetic contribution, craving, tolerance, progression, and loss of control were identified. A history of the disease concept of alcoholism and an overview of the rise and fall of the temperance movements and self-help organizations in the 1800s are also provided. The founding of Alcoholics Anonymous in 1935 and the introduction of the Minnesota Model of alcoholism treatment in the late 1940s are discussed, as is their evolution to the present day.

Alcohol use is widespread among nearly all segments of American society, and no demographic group is immune to alcohol problems and alcoholism. Chapter 2 describes the latest statistics on alcohol use, alcohol problems and alcoholism, patterns of drinking that distinguish certain groups from others (e.g., college students), and those demographic groups that are especially susceptible to alcohol problems. Also discussed are the

factors that place certain individuals at a much higher risk of developing alcoholism. Those factors include

- childhood stress and emotional trauma;
- genetic factors;
- the influence of family, culture, and the peer group;
- psychological and personality factors; and
- the interaction between genetic susceptibility and environmental stress.

The use of alcohol is linked to many harmful consequences not only for the drinker but also the family and friends of the drinker, and the community and society inhabited by the drinker. Some of the social harms associated with alcohol include crime, accidents and injuries, illness, disease and death, and disrupted school and work performance and productivity. The public health impact of alcohol use and alcoholism is discussed in chapter 3. The chapter includes the impact of alcohol use in special populations such as women, college students, and adolescents, and the contribution of drinking to crime, domestic abuse, and injuries, including traffic-related accidents and fatalities. The total economic cost of alcohol abuse is also discussed.

Chapter 4 explains the biological basis of alcoholism. While social drinking and occasional heavy drinking are not viewed as having a disease basis, a subset of drinkers will eventually develop alcohol dependence. Certain core symptoms of alcohol dependence reflect potential changes in the structure and function of key brain regions. Those symptoms are

- the inability to control one's drinking,
- the persistence in drinking despite harmful consequences,
- craving of alcohol,
- preoccupation over the next drink, and
- the need to drink more alcohol to achieve the desired effect.

These changes in brain function serve to perpetuate compulsive drinking and may make relapse likely since they may persist after drinking has

stopped, forming the basis for defining alcohol dependence as a chronic disease. Alcoholism shares many similarities with other chronic diseases such as diabetes and high blood pressure. However, regarding alcoholism as a disease does not remove responsibility from the alcoholic for continuous self-care, any more than it does from the diabetic or hypertensive patient.

Starting in chapter 4, “Notes” in italic font may appear. Because some of the material related to the science of alcoholism and the pharmacology of drug therapies for alcoholism can be especially complex due to its language, the authors offer an additional explanatory note. In order to preserve the integrity while keeping the material accessible to the lay reader, a summary paragraph in italics is placed at the end of the more complex and technical sections.

Alcohol withdrawal develops shortly after a person with alcohol dependence abruptly stops drinking. The severity of withdrawal can vary from minor symptoms to hallucinations, seizures, permanent disability, or death. Alcohol withdrawal is discussed in chapter 5, including the signs and symptoms, the factors that influence the severity, and the medications that are used to manage alcohol withdrawal. Also described is post-acute withdrawal from alcohol, which reflects the symptoms of alcohol withdrawal that extend beyond the period of acute alcohol withdrawal. Post-acute withdrawal may last for months in some persons. It may consist of disturbances in mood, memory, stress tolerance, sleep, and energy level. Changes in brain function from chronic alcohol abuse can contribute to the symptoms of post-acute withdrawal, which may be reduced through active involvement in a recovery program such as Alcoholics Anonymous (AA).

Alcoholics Anonymous (AA) is the most widely available and successful recovery program for persons who want to quit drinking. In the past decade, a large volume of research has validated AA as a potentially essential and effective component of long-term recovery. Until fairly recently, the scientific evidence of AA success was much weaker, resulting in mixed feelings among some clinicians in referring clients, and in greater effort among researchers in investigating alternatives to AA.

Now, with the strength of scientific evidence, the focus of researchers

has shifted, in part, to exploring ways to increase the attendance and retention of new members in AA. Special attention is given to those members referred from treatment settings. Chapter 6 discusses AA in depth and the different aspects of AA such as the demographic makeup of its members, the structure and organization, the Twelve Step program, and the spiritual framework. Also discussed are the specific elements that operate within AA that contribute to sobriety and the other benefits from involvement.

The concept of spirituality itself is confusing for many people, and this concept is explained to the reader from several different perspectives. Also discussed are the various self-help organizations that provide an alternative to AA for persons preferring a more tailored or secular approach, as well as the latest research on the effectiveness of these programs in promoting abstinence.

Professional treatment of alcohol dependence consists of psychological and medication approaches, and these are discussed in chapter 7. Medication therapy of alcohol dependence involves the use of drugs that are free of abuse potential, with the goal of reducing the craving for alcohol, irritability, and anxiety that plague many persons trying to stay sober. Medications are also used in persons who frequently relapse in order to block the pleasurable effects of alcohol and therefore the motivation to continue drinking if a relapse begins.

Effective medication therapy is the direct result of advances in the understanding of the brain biology of alcohol dependence. Research has identified abnormal functioning in several brain chemical systems that are associated with alcohol cravings and emotional distress in early recovery. Medications are used to target these systems to normalize their function, which in turn can reduce these symptoms and diminish the likelihood of relapse in early recovery. There is universal agreement that medications should never be used as the only source of therapy, and that medications will never replace self-help programs such as AA as the cornerstone of long-term sobriety. However, medications can play a vital role in blocking the obsession and craving to drink and in reducing the risk of relapse during early recovery when relapse risk is highest.

Psychological approaches to treating alcohol dependence address the problematic thinking, emotions, and behavior of alcoholics trying to achieve and maintain sobriety. These approaches consist of cognitive-behavioral therapy, behavioral therapies intended for the alcoholic or for the family or partner of the alcoholic, motivational enhancement interventions, and an approach that combines elements of several psychological treatment approaches to address relapse prevention.

Other aspects of professional treatment are also discussed. The average American has probably seen many television commercials for alcoholism treatment where a high “cure” rate is promised, which can raise questions about the actual success rates of alcohol treatment programs. Chapter 7 presents a discussion of the history of treatment outcome reporting, and how improvements in research methods have led to the more accurate evaluation of treatment outcome. The elements of successful recovery from alcoholism are also described, as well as the special treatment needs of older adults.

Meditation and prayer are important spiritual components of recovery for many alcoholics and are included in Step Eleven of AA. Although comprehensive coverage of prayer is beyond the scope of this book, chapter 8 gives a detailed discussion of meditation and the use of meditation throughout history to achieve greater closeness with the Divine. The meditation approaches most often used and their spiritual roots are also presented. Recent research provides us with an interesting account of positive changes in brain function and structure with regular meditation, and how these changes parallel the transformations in thought, emotion, behavior, and perception reported by practitioners. Many alcoholics entering sobriety have histories of emotional trauma, and a discussion is given of research demonstrating the benefits of meditation in persons recovering from post-traumatic stress.

Chapter 9 discusses current trends in a number of areas related to alcoholism treatment and recovery. Some include

- treatment development;
- the growth of informal community-based recovery communities and recovery advocacy organizations;

- the continued specialization of Twelve Step programs; and
- the growing influence of electronic communication as it relates to information sharing, treatment, and recovery support of alcoholism.

Also described is an emerging paradigm change in the approach to professional alcoholism treatment, where shortcomings in the current approach of treating alcoholism as an acute illness are leading to a movement calling for a long-term disease/recovery management approach.

In short, this book provides the reader with the most up-to-date, state-of-the-art knowledge and understanding of alcoholism and alcohol-related problems. A virtual explosion in the publication of high-quality, groundbreaking scientific research on alcohol use disorders and related problems has occurred in the last decade. This recent body of research is dramatically changing our understanding of the disease concept of alcoholism. The scientific process is guiding the development of future treatment and revealing how therapies currently available can be used more effectively.

We have reviewed hundreds of these research studies and present the scientific knowledge most likely to be helpful and interesting to the professional, clinician, and student working with alcoholic clients, the director or administrator of substance abuse treatment programs, as well as the person with a drinking problem, the concerned loved one of someone with an alcohol problem, and the recovering alcoholic.



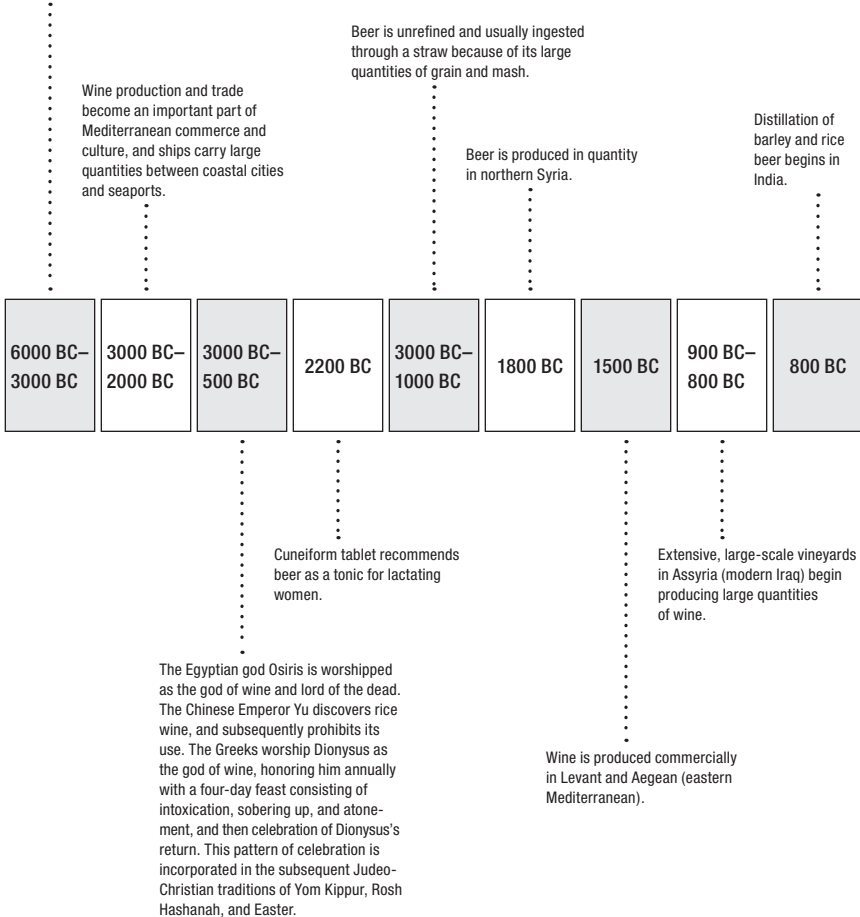
CHAPTER 1

History of Alcohol Use, Alcoholism, and Treatment in the United States

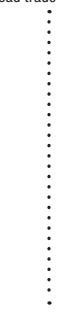
Alcohol has been one of the most widely used intoxicants throughout human history. Originally, alcohol was a powder and not a liquid. The word *alcohol* originates from the Arabic term *al-kuhul*, meaning *kohl*, a powder for the eyes, which later came to mean “finely divided spirit.” From 3000 to 2000 BC, numerous cultures throughout the world (except in North and South America) described the use of alcohol for medicinal, social, religious, or recreational purposes. The following is a brief timeline of the discovery and use of alcohol throughout recorded history (Courtwright 2001; Walton and Glover 1999; Sherratt 1995; Escotado 1999; McCarthy 1963).

The History of Alcohol Use

The selective cultivation of grape vines for making wine (termed *viticulture*) is believed to originate in the mountains between the Black and Caspian seas (modern Armenia). In Mesopotamia, the Sumerians worship Gestin, a goddess and protector of the vine.

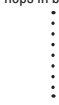


Wine making reaches China along the Silk Road trade route.



500 AD

First specific reference to the use of hops in beer, from France.



768

1100

The distillation process of alcohol produces beverages containing 50% alcohol or higher. Alcohol is used as a painkiller and anesthetic during and after surgery.



1400–1599

Alcohol distillation is first documented by the medical school at Salerno, Italy, and is named “spirits” in reference to it being the extracted spirit of the wine.

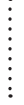
From pre-history through 1599 alcoholic beverages are derived from fermentation and consist of wines and beers containing 14% alcohol at the most. Use of these beverages is common, both in ceremony and to replace other beverages believed unsafe to drink, such as water from public wells.

The German Beer Purity Law (*Reinheitsgebot*) makes it illegal to produce beer with anything except barley, hops, and pure water.



1516

Benedictine, a cognac-based alcohol with added herbs, is developed at the monastery in Fecamp, Normandy.



Early 1500s

1550–1575

Widespread drunkenness is described in England, and it is mentioned for the first time as a crime. Preventive statutes multiply.

England experiences the “gin epidemic” prompted in part by low cereal prices and an unfavorable trade balance that surged production of cheap gin. By the 1740s, the long-term effects of this widespread excessive alcohol use are described as manifesting in declining birth rates and an astronomical incidence of malformed and retarded children, catalyzing social protest.



1710–1750

The British Parliament increases taxes on distilled spirits and limits the numbers of places it can be sold.



1751

Historical Per Capita Alcohol Use in the United States

The following table illustrates the estimated per capita (age 15 and older) consumption of alcohol from 1850 to 2007, based on gallons of pure alcohol per person per year (excerpted from NIAAA 2009).

Table 1.1

Historical Per Capita Alcohol Consumption in the U.S.

Year	Gallons of pure alcohol per person
2007	2.31
2000	2.18
1990	2.45
1980	2.76
1970	2.52
1960	2.07
1950	2.04
1940	1.56
1934 ¹	0.97
1916–1919	1.96
1901–1905	2.39
1881–1890	1.99
1870	2.07
1850	2.10

1. The year following the repeal of prohibition.

Alcohol Use in Colonial America

Settlers from northwest Europe brought alcohol to the New World when they first arrived in 1492, and with it the attitudes they harbored toward alcohol and its use. Alcohol was regarded as the “Good Creature of God”—a gift from the Almighty that was integrated into most aspects of colonial life. Men, women, and children drank alcohol on a daily basis, and not solely for the intoxicating effects (White 1999).

The disease and death that was spread by contaminated water earned alcohol its designation as *aqua vitae*—the water of life (Vallee 1998). Children as young as infant-age were given warmed alcohol with bread or other food, and young boys entered taverns to be taught by their fathers the arts of storytelling and drinking (Rorabaugh 1979; Steinsapir 1983). Although alcohol was valued in colonial America, drunkenness was condemned as a sinful misuse of this gift from God. These attitudes toward alcohol use were reflected by the numerous antidrunkenness laws, and also by the absence of laws that limited the age of access to alcohol (Mosher 1980; White 1999).

Cider, beer, and wine were the preferred alcoholic beverages. The Puritans believed alcohol was God’s gift to man, and a test of his soul. This viewpoint is reflected in the Puritan aphorism “The wine is from God, but the drunkard is from the Devil.” A group called Tithingmen, tax collectors overseeing ten-family units, monitored excessive drunkenness and reported it to the local Protestant minister. He in turn could punish first-time offenders. Repeated and chronic public inebriates were sent to the governor’s representative for punishment (Dunlap 2006).

During the colonial era, the tavern was the center of the community. For the sake of convenience, the first colleges in America had breweries on campus for faculty and students. Even though the use of alcohol was pervasive, drunkenness remained highly stigmatized, and isolated cases of chronic drunkenness were viewed as a moral or criminal matter and not a medical or public health problem (White 2004).

Alcohol and Native Americans

At the time of initial European contact, Native American tribes had a highly sophisticated knowledge of botanical psychopharmacology and used this understanding to ingest a broad spectrum of psychoactive drugs within a medicinal or religious context. There is very little pre-colonial evidence of recreational drug use or abuse among Native American tribes until distilled alcohol was introduced by European settlers (MacAndrew and Edgerton 1969; Mancall 1995; Westermeyer 1996; White 1999).

In a book entitled *Alcohol Problems in Native America* (2006), Coyhis and White offer the following perspective on the development of alcohol problems among Native Americans:

There has yet to be definitive evidence that Native Peoples physically respond to alcohol differently than other races or possess a unique biological vulnerability to alcoholism . . . No gene has been identified that makes Native Americans more susceptible to alcoholism than other races. Differences of alcohol metabolism and genetic vulnerability to alcoholism are traits of individuals and families, not traits of racial and ethnic groups. There are as many differences in vulnerability to alcohol problems (and the choice to drink or not drink, the frequency and intensity of drinking, choices of alcoholic beverages, the locations of drinking, the purposes for drinking, and the effects of drinking) within and across Native tribes as between Native people as a whole and other racial/cultural groups.

The authors state that many factors contributed to the alcohol problems experienced by Native Americans since its introduction by Europeans in 1492, including the use of alcohol to facilitate the colonization and subjugation of Native Americans by Europeans and Americans alike. The authors conclude that the underlying cause of alcohol problems among

Native Americans stems from the suppression, oppression, and colonization of Native Americans by a radically different cultural group that also deliberately used alcohol as a weapon of colonization (Simonelli 2006).

African Americans

Most Africans who were forced into slavery in the Americas came from West Africa where beer and wine had been incorporated into social and religious customs since antiquity among the non-Islamic (Islam prohibits alcohol use) African cultures. Moderate drinking was encouraged and drunkenness was stigmatized through drinking rituals, and alcohol problems, which seldom existed previously, rose in tandem with the colonization and deculturation of African tribes (Pan 1975; White and Sanders 2002).

Access to alcohol by African slaves was restricted due to concerns among slave owners over financial loss if a slave became injured or killed while intoxicated, and over fear that uncontrolled alcohol use could fuel a slave rebellion. The exception to this was the encouragement of slaves by their slave masters to drink heavily on Saturday nights, on holidays, and during harvest.

In his diary (1855), Frederick Douglass viewed this controlled promotion of alcohol intoxication on selective occasions, and through rituals that included drinking contests, as a way to keep the slave in “a state of perpetual stupidity” and “disgust the slave with his own freedom.” Douglass further noted how the slave master’s controlled promotion of drunkenness reduced the risk of slave rebellions since slaves were unlikely to plan an escape or insurrection while intoxicated. In contrast, a sober, thinking slave was the most dangerous threat to the established order (White, Sanders, and Sanders 2006).

Before emancipation, freed blacks often chose not to use alcohol, seeing sobriety as a prerequisite to personal safety and citizenship. When black people did drink, they did so moderately. The extent of their moderation led the medical community to believe that they were racially immune to the influence of alcohol (Herd 1985). Although drinking and intoxication among black people increased following emancipation, the most serious

alcohol-related problem for black people in America was encountering intoxicated white people (Blassingame 1972; White and Sanders 2002).

Rising Alcohol Use in the Early 1800s

It has been said that America went on an extended drunken binge in the decades following the Revolutionary War (Rorabaugh 1979). Between 1780 and 1830, the annual per capita alcohol consumption in America rose from 2.5 gallons to more than 7 gallons. Drinking preferences shifted from fermented beverages such as cider and beer to rum and whiskey (Rorabaugh 1979). During this period, the colonial tavern that was a community hub gave way to the urban saloon, which was regarded as a symbol of drunkenness and vice. Likewise, moderate drinking within a family context shifted to excessive drinking by unattached and unruly males.

These dramatic and alarming changes in drinking patterns, and the visible emergence of alcohol problems, prompted the beginning of a century-long temperance movement whose goal was the complete abolition of alcohol for the sake of preserving the well-being of children, families, communities, and the country (Cherrington 1920; Lender and Martin 1982; Rorabaugh 1979). Another byproduct of this rise in drinking and alcohol problems was the discovery of addiction (Levine 1978; White 2004).

Temperance Movements and Mutual-Help Societies

As per capita alcohol use skyrocketed in America between 1780 and 1830, concern grew into alarm over the misuse of alcohol by children, especially among orphaned children. The emerging temperance movement responded with a series of actions that included (Mosher 1980)

- lobbying for a minimum drinking age and temperance education laws,
- publishing temperance literature aimed at young drinkers,
- including young people in temperance society activities, and
- suppressing drinking on college campuses.

Temperance societies of the nineteenth century included cadet branches for young inebriates. Many of these young alcoholics who recovered would join in the antidrinking outreach crusades to young drinkers (Foltz 1891). Young problem drinkers were also admitted to the first addiction treatment institutions in America, and alcoholics between the ages of 15 and 20 made up about 10% of admissions to inebriate homes and inebriate asylums. By the 1890s, patients as young as twelve were being admitted to hospitals for detoxification (White 1998).

Religiously oriented urban rescue missions and rural inebriate colonies also provided institutional intervention for chronic alcoholism. This rescue work with chronic or late-stage alcoholics was later institutionalized within the programs of the Salvation Army (White 2004).

Abstinence-based mutual-aid societies organized by and for those with alcohol problems originated in two cultural contexts: first within Native American tribes in the eighteenth century and then within Euro-American communities in the mid-nineteenth century (White 2003). The earliest recovery mutual-aid societies grew out of Native American religious and cultural revitalization movements during the 1730s. These societies continued to remain active and influential well into the nineteenth century. Among the more prominent leaders were Wangomend, the Delaware Prophet (Papoonan, Neolin), the Kickapoo Prophet (Kenekuk), the Shawnee Prophet (Tenskwatawa), and Handsome Lake (Ganioda'yo) (White 2004).

Similarly, by the 1830s, and some one hundred years before the founding of Alcoholics Anonymous, Anglo American alcoholics began seeking abstinence and recovery within local temperance societies. However, it took the Washingtonian Movement of 1840 to motivate large numbers of Anglo American alcoholics into joining sobriety-based mutual-aid societies. The Washingtonians rapidly grew to an organization of more than 400,000 members, but then collapsed.

Many of its former members dispersed into more underground organizations via the creation of sobriety-based Fraternal Temperance societies. Eventually, the Fraternal Temperance societies disintegrated over political conflict or deviation from their initial mission to help the still-suffering

alcoholic, and were replaced by the Ribbon Reform clubs and other local sobriety-based fellowships such as the Drunkard's Club in New York City. Within the network of inebriate homes, asylums, and addiction cure institutes emerged additional alcoholic mutual-aid societies (White 2004).

Professional and Medical Approaches to Nineteenth-Century Alcohol Problems

Inebriate homes were introduced during the 1830s out of the belief, among some temperance societies, that alcoholics needed more than to sign pledges and attend meetings to achieve and sustain abstinence. The new viewpoint believed recovery from alcoholism was a process of moral reformation and immersion in sober fellowship. The inebriate homes utilized short, voluntary stays followed by affiliation with local recovery support groups (White 2004).

The medically directed inebriate asylum was another institution created during the mid-nineteenth century. It arose from the need for specialized medical facilities for chronic alcoholics. Many of the clients in these institutions were legally coerced by multiyear legal commitments. These facilities combined physical and psychological treatment with drug therapies, hydrotherapy, and hypnotherapy. In 1864, the first of these facilities—the New York State Inebriate Asylum—opened under the leadership of Dr. Joseph Edward Turner (White 2004), a prominent advocate of a disease concept of inebriety (White 2000a).

The inebriate homes and asylums began to face competition from private, for-profit addiction cure institutes, the most famous being the Keeley Institute. There was also competition from the patent medicine industry, which bottled and sold home remedies and cures for alcohol, tobacco, and drug habits. Some of these products originated from the addiction cure institutes. The widespread use of these addiction cures continued until an exposé in 1905 revealed that most of these products contained high doses of morphine, cocaine, alcohol, or cannabis (White 2004).

An increasingly vast network of inebriate homes and asylums, private

addiction treatment institutes, and patent medicines that cured addiction became established between 1850 and 1900. In 1870, directors of several inebriate homes and asylums met in New York City to create the first professional association for addiction treatment providers called the American Association for the Cure of Inebriety.

In 1876, the Association published the first journal specializing in addictions called the *Quarterly Journal of Inebriety* (White 2004). This journal published hundreds of articles that shared the theme of alcohol addiction as a disease. Joined by a growing number of medical textbooks on inebriety, the journal advocated for a disease concept of addiction (White 2000a).

The 1870 Bylaws of the American Association for the Study and Cure of Inebriety include the following:

1. Intemperance is a disease.
2. It is curable in the same sense that other diseases are.
3. Its primary cause is a constitutional susceptibility to the alcoholic impression.
4. This constitutional tendency may be either inherited or acquired (White 2000a).

Eventually, the urban hospital assumed an increasing level of responsibility for the care of the chronic inebriate. In 1879, Bellevue Hospital in New York City opened an inebriate ward. The number of alcoholic patients admitted for care increased from 4,190 in 1895 to more than 11,000 in 1910. Almost all of these institutions treated addictions to all drugs including alcohol (White 2004).

Following is a discussion of some of the more noteworthy “medical” approaches to the treatment of alcoholism.

The Keeley Cure

The Keeley Institute was an organization for the treatment of opiate and alcohol addiction by Leslie Keeley, a Civil War surgeon who announced his cure in 1879 with his famed slogan, “Drunkennes is a disease and I

can cure it.” His secret injections of gold chloride became known as the Gold Cure. Keeley’s cure was touted as being made from “double chloride of gold,” but in truth actually contained atropine, strychnine, arsenic, cinchona, and glycerin.

Patients admitted to his institutes were tapered from alcohol or opiates, received periodic injections, ingested a small amount of Keeley’s formula every two hours, and followed a regimen of healthful diet, fresh air, exercise, and adequate sleep. Patients were required to pay \$160 up front and stay for thirty-one days. It is unknown how many of the 400,000 Keeley graduates remained abstinent from opiates or alcohol (Blair Historic Preservation Alliance 2008; “Medicine: Keeley Cure” 1939). It is also unknown how many died of his cure.

Through his practice, Dr. Keeley eventually amassed a fortune of more than \$1 million. However, by 1900 the approach was largely discredited. The Keeley Cure, however, did have some initial success. At one time more than 200 treatment centers existed. Keeley Institute patients who recovered from their addiction were honored as graduates and urged to promote the treatment that had helped them. Patients were also encouraged to involve themselves in what would now be referred to as group therapy, a factor that likely contributed to the success of those who remained abstinent.

Despite the view that Keeley’s Gold Cure was merely a successful example of nineteenth-century quackery, Dr. Keeley made an important contribution to the field of addiction treatment. He was one of the first to widely treat addiction as a medical problem (Blair Historic Preservation Alliance 2008). The Keeley Institute was also significant because, although it predated modern treatment programs by seventy years, several elements common to contemporary treatment were used, such as use of the group process for support; an emphasis on a holistic approach addressing diet, exercise, and sleep; and the one-month residential stay.

Morphine in Late Nineteenth to Early Twentieth Century

Legitimate medical use of opiates emerged in the late nineteenth century as a substitute treatment for alcoholism. Although morphine was well known for its addiction potential, it was viewed as a dramatic improve-

ment over the effects of alcoholic drinking (Black 1889). Many physicians converted alcoholics to morphine users, and in some parts of the country this practice did not die out among older physicians until the late 1930s or early 1940s.

In 1928, Dr. Lawrence Kolb, Assistant Surgeon General of the United States Public Health Service, pointed out the advantages of opiate substitution therapy. “More than any other unstable group,” Dr. Kolb wrote, “drunkards are likely to be benefited in their social relations by becoming addicts. When they give up alcohol and start using opium [i.e., morphine or other opiates], they are able to secure the effect for which they are striving without becoming drunk or violent” (Kolb 1962).

LSD Research in the 1950s–1960s

Following its discovery in 1943, the hallucinogenic drug LSD (d-lysergic acid diethylamide) was introduced to medical and behavioral research in the late 1940s (Dyck 2005). Treatment of alcoholism was considered one of the most promising areas of investigation involving LSD. The initial rationale for its use was to replicate some of the experiences of a delirium tremens (DT) to facilitate the alcoholic hitting bottom. However, when it was observed that LSD had the potential to induce a profound transformative experience similar to a religious conversion, its use and purpose was revised (Mangini 1998).

Early enthusiasm over the initial positive results gave way to skepticism when researchers attempted to isolate the drug effect from the set and setting, often by blindfolding or restraining and isolating subjects given the drug. The environment in which the subject experienced the drug effect was eventually recognized as an important factor in the outcome (Dyck 2005).

In 1962, the first controlled trial involving LSD and alcoholism was published. It compared subjects who received group therapy, individual therapy from a psychiatrist, or LSD at the end of a hospital stay. The study followed patients for six to eighteen months, and reported that 38 of the 58 patients treated with LSD remained abstinent during the follow-up period. This was a remarkable finding when compared with those who received only group

therapy (7 of 38 remained abstinent) and individual therapy (4 of 35 remained abstinent) (Dyck 2005; Jensen 1962). However, all research involving LSD was halted in the mid-1960s when the drug became illegal.

Origin and History of the Disease Concept of Alcoholism

Three key issues helped usher in the birth of a disease concept of alcoholism in America. The first was the emergence of alcohol problems resulting in a breakdown of community norms that had long contained drunkenness in colonial America; the second was the changing patterns of consumption from fermented beverages to distilled spirits; and the third was the nearly threefold increase in alcohol consumption between 1790 and 1830 (White 2000a).

Dr. Benjamin Rush was the first to articulate a disease concept of chronic drunkenness and call for the creation of special institutions for the care of the inebriate (White 2007a). In 1784, Rush described the progressive nature and medical consequences of chronic drunkenness. He suggested the condition was a medical instead of a moral problem and argued that physicians had the responsibility of caring for persons with this disorder (White 2004). The changing perception of chronic drunkenness was also strongly influenced by the Reverend Lyman Beecher, who in 1825 characterized intemperance as an accelerating disease. He described in detail the early stages of alcoholism and argued that complete long-term abstinence was the only viable approach to prevention and cure (White 2004).

These two highly influential figures, Rush and Beecher, along with other prominent physicians and social reformers, helped to redefine drunkenness as a medical problem during the transition from the eighteenth to the nineteenth century. These leaders encouraged physicians to treat inebriety within specialized institutions for the alcoholic. At this time, the core elements of an addiction disease concept were identified and described as

- a hereditary predisposition;
- drug toxicity;

- morbid appetite (craving);
- pharmacological tolerance and progression;
- loss of control of substance intake; and
- the pathophysiology of chronic alcohol, opiate, or cocaine consumption (White 2001b; White 2004).

Although the term *alcoholism* was coined in 1849 by Swedish physician Magnus Huss, the preferred term of this era was *inebriety*, whose meaning was analogous to the term *addiction*. Medical textbooks included chapters on alcohol inebriety, opium inebriety, cocaine inebriety, and inebriety from coffee and tea. The widespread use of the term *alcoholism* did not actually occur until the early twentieth century (White 2007b; White 2004).

During the 1870s and 1880s, the disease concept of inebriety or alcoholism formed the foundation of the movement to treat the disease medically and scientifically. The movement advocated for specialized institutions where inebriates could be treated.

However, support for a disease concept of alcoholism among professionals caring for the inebriate was not unanimous. In 1874, Dr. Robert Harris mounted perhaps the most fully articulated opposition to the disease concept, stating that drunkenness should be viewed as a habit, sin, or crime that cannot be cured in a hospital but can be reformed. The chronic drunk was also viewed as a victim of the promotion or marketing of alcoholic beverages (White 2000a).

In summary, nonmedical concepts of alcohol and other drug addiction competed for prominence with the disease concept. They espoused that

- addiction originated in the person and was a reflection of vice and sin;
- addiction resided in the product (alcohol, opium, or cocaine); and
- addiction was caused by aggressive alcohol and other drug promotion by distilleries and breweries, saloons, and physicians and pharmacists.

Each of these views produced radically different solutions to address the source of the addiction problem. The disease concept as a purely medical

concept soon fell out of favor at the end of the nineteenth century along with the collapse of the treatment infrastructure (White 2000a).

The Collapse of Specialized Treatment for Alcohol Problems in the Early Twentieth Century

The collapse of America's first addiction treatment infrastructure was due to multiple factors, including

- the exposure of ethical abuses related to business and clinical practices,
- ideological differences within the field,
- the lack of scientific validation of treatment effectiveness,
- the departure through aging and death of leaders in the field,
- economic downturns that impacted philanthropic and government support, and
- cultural pessimism over whether permanent recovery from alcohol and drug problems could ever be achieved (White 2004).

As a result, the nineteenth-century mutual-aid societies had collapsed in tandem with the inebriate homes and asylums (White 2004).

Eventually, the care of alcoholics and addicts shifted to penal institutions and large public hospitals, and to psychiatry. The prevailing belief in psychiatry during this time was that excessive alcohol or other drug use was not a primary disease but the superficial symptom of a deeper psychological problem. It could be treated if the hidden subconscious forces that drove excessive alcohol or other drug use were confronted during psychotherapy (White 2000a).

The reluctant assumption of responsibility by psychiatry for the care of alcoholics and drug addicts led to a new push to find more humane and effective treatments. These included the founding of the Emmanuel Clinic model. Its early efforts included using recovered alcoholics as lay therapists, treating affluent alcoholics and addicts in private hospitals and clinics, and starting a model for outpatient treatment in Connecticut and Georgia.

There was also a dark side to the involvement of psychiatry in the treatment of addiction. It stemmed from alcoholics and addicts being subjected to the same treatments and policies currently in vogue with mentally ill patients. These included forced sterilization and legal commitment in the early twentieth century, prefrontal lobotomies, and chemical and electroconvulsive therapies (White 2000a). When admitted or sentenced to the aging state mental hospitals or the rural inebriate penal colonies, alcoholics and addicts were also subjected to the worst abuses of these institutions.

The obvious disregard for the well-being of alcoholics and addicts was evidenced by some of the medical procedures they were subjected to, such as serum therapy (a procedure involving blistering the skin, withdrawing the serum from the blisters, and then re-injecting it as an alleged aid in withdrawal) and the use of bromide therapy to aid detoxification, which had a high mortality rate.

Much of the modern antim medication bias that lingers among some members in the addiction treatment field and older members of AA today stems from the past abusive and barbaric practices during this period under the guise of medicine (White 2004).

Among the very few enlightened resources available to alcoholics and addicts during the early twentieth century was the beginning of a new generation of private hospitals that started with the Charles B. Towns Hospital in New York City and an outpatient clinic in Boston that arose from the Emmanuel Church. This clinic employed a unique program of lay therapy that was the precursor to modern addiction counseling. The Emmanuel Clinic also organized its own self-help program, the Jacoby Club, for patients who had completed its program (White 2004).

The Jacoby Club was founded in 1910 as a club for alcoholic men, and sought to combine religion, psychology, and medicine in the treatment of alcoholism. This absence of mutual-aid resources changed in 1935 when the meeting of two alcoholics, Bill Wilson and Dr. Robert Smith, reaching out for mutual support, marked the founding of Alcoholics Anonymous (AA) (White 2003).

The History of Alcoholics Anonymous

Alcoholics Anonymous (AA) was established in 1935 in response to pervasive alcohol problems during a time when resources were scarce (Trice and Staudenmeier 1989). AA offered unconditional support and practical advice to help its members stop drinking. The message of forgiveness and understanding given by people who themselves had been actively dependent on alcohol helped alleviate shame and guilt associated with alcoholism (Kurtz 1981).

Self-help organizations tend to internalize the broader cultural and societal themes into which they are born, and AA's birth in 1935 and many of its core concepts (e.g., powerlessness, unmanageability, hope, and service) were rooted in the economic and spiritual crash of the Great Depression of the 1930s. AA historian Ernest Kurtz (1991) has suggested that the unique program of recovery of AA could only have sprung from the circumstances of the Depression era. AA also arrived in the wake of the repeal of Prohibition and a century-long, culturally divisive debate between wet and dry political opponents.

Conception of AA

In 1926, Rowland Hazard, a Yale graduate and prominent Rhode Island businessman, was treated for alcoholism by the renowned psychoanalyst Carl Jung (Bluhm 2006). Following a relapse in 1927, Hazard requested further treatment from Jung. Jung communicated to Hazard that he could no longer treat him because Hazard had already received the best care psychiatry and medicine had to offer. Jung also told Hazard that any hope for future recovery would have to be found elsewhere. He said that some alcoholics had found relief from their insatiable appetite for alcohol through a powerful spiritual or religious experience, and he suggested that Hazard seek out such an experience.

This recommendation led to Hazard's subsequent involvement with the Christian evangelical Oxford Group. Achieving sobriety within the Oxford Group, Rowland Hazard began carrying his message of hope and sobriety to other alcoholics. In November 1934, Hazard carried this mes-

sage to Ebby Thacher. On the verge of being sentenced to Windsor Prison, Thacher was instead released to Hazard's custody.

In late November 1934, the newly sobered Thacher carried that same message of hope to his longtime friend Bill Wilson. Thacher's visits did not produce an immediate effect, but instead began an internal dialogue that triggered a crisis in Wilson's drinking and served as a catalyst for the subsequent events that eventually led to the founding of AA (*Pass It On* 1984, 115; White and Kurtz 2008).

The chain of interaction among Jung, Hazard, Thacher, and Wilson mark the earliest moments in the founding of AA. Jung acknowledged the limitations of professional assistance in treating alcoholism, and believed in the legitimacy to the transformative power of spiritual experience. The Hazard-Thacher-Wilson connections established the kinship of common suffering (one alcoholic sharing with another alcoholic) as the basic unit of interaction in the yet-to-be-born organization of AA (Alcoholics Anonymous World Services, Inc., 1957; White and Kurtz 2008).

Following Ebby Thacher's visits, Bill Wilson's drinking reached another critical point on December 11, 1934, when he was rehospitalized for detoxification at the Charles B. Towns Hospital in New York City. At age thirty-nine, Wilson had had his last drink. Although a confirmed agnostic, a few days later during a belladonna-facilitated detoxification,² Wilson underwent a profound spiritual experience in the aftermath of a deepening depression. Later, questioning whether he was losing his sanity, Wilson consulted his physician, Dr. William Silkworth. Silkworth, known in AA folklore as "the little doctor who loved drunks," framed the event as a potential conversion experience (White and Kurtz 2008) much like the one Carl Jung spoke of.

2. The belladonna detoxification (or Belladonna Cure) was a regimen given to newly admitted alcoholics to Towns Hospital who showed signs of DTs or severe alcohol withdrawal. Within the first twelve hours, the patient was sedated with a combination of chloral hydrate, morphine, paraldehyde, mercury, and strychnine, followed by repeated administration of belladonna (*Atropa belladonna*, deadly nightshade) and henbane (*Hyoscyamus niger*) over the next two days. Both plant-derived products produce delirium, hallucinations, light sensitivity, confusion, and dry mouth (Pittman 1988).

Following Thacher's lead, Wilson joined the Oxford Group, a Christian movement popular among wealthy mainstream Protestants. Headed by an ex-YMCA missionary named Frank Buchman, the Oxford Group combined religion with pop psychology to emphasize that all people can achieve happiness through moral improvement. To help reach this goal, the organization's members met in private homes to study devotional literature and share their inner thoughts and experiences (Koerner 2010).

In the months following his discharge, Bill Wilson went on a crusade to sober up the alcoholics at the Towns Hospital and Calvary mission by describing his spiritual experience, but he was met with indifference (White and Kurtz 2008).

In May 1935 during an extended business trip to Akron, Ohio, Wilson began attending Oxford Group meetings at the home of a local industrialist. It was through the group that he obtained the name of surgeon and closet alcoholic Robert Smith, who was also an Oxford member. Demoralized at the end of a failed business trip, Wilson found himself in the lobby of the Mayflower Hotel fearing that he might take a drink and destroy his hard-earned sobriety. He sensed that he needed to find another alcoholic with whom he could talk in order to maintain his sobriety. Rather than reach out to a professional, he made contact through a series of phone calls with Robert Smith (Alcoholics Anonymous 1956).

Their growing friendship, mutual support, and vision of helping other alcoholics marked the formal ignition of AA as a social movement. The date of Dr. Bob Smith's last drink in June of 1935 is celebrated as AA's founding date. Soon after that last drink, Bill Wilson and Dr. Bob Smith began the search for AA number three. The mutual discovery that Bill Wilson and Dr. Bob Smith could achieve together what they were unable to do alone became the foundation of the soon-to-emerge AA program (Koerner 2010; White and Kurtz 2008).

The Growth of AA, 1936–1950

In its earliest days, AA existed within the confines of the Oxford Group. By late 1936, fledgling groups of recovering alcoholics were meeting within the larger framework of the Oxford Group in Akron, Ohio, and the New

York City area, offering special meetings for members who wished to end their dependence on alcohol. However, Wilson and his followers left the Oxford Group in large part because Wilson dreamed of creating a truly mass movement instead of one that catered to the elites that Buchman targeted (Koerner 2010; White and Kurtz 2008). Although Wilson and Smith left the Oxford Group, this movement greatly influenced the structure, practices, and ideology of AA (Bufe 1998).

Bill Wilson stayed sober and immersed himself in growing the AA movement. But soon a crisis unfolded over the poverty in which he and his wife Lois were living. Charles B. Towns, owner of the Towns Hospital where Wilson had repeatedly been treated, offered Wilson paid employment at the hospital as a “lay alcoholism therapist.” The decision by Wilson to turn down the offer was actually forced by his fellow recovering alcoholics who were concerned over the potential harm to the fledgling organization with Wilson becoming employed and affiliated with the hospital (White and Kurtz 2008).

During the mid to late 1930s, Wilson began drafting what would become the book *Alcoholics Anonymous*. When published, the book was referred to as the Big Book because the printers of the book were instructed to use the thickest paper available for the first edition so that it would seem worth the price to the generally financially strapped alcoholics to whom it was targeted (Kurtz and White 2003).

The core of AA principles is found in chapter five of the Big Book, entitled “How It Works.” Wilson formulated the Twelve Steps in 1939, and it is speculated that he decided on twelve because of the twelve apostles. Formulating these Steps, Wilson was strongly influenced by the precepts of the Oxford Group and by psychologist William James and his classic work *The Varieties of Religious Experience*, which Wilson read shortly after his spiritual experience at Towns Hospital (Koerner 2010).

The initial publication of the Big Book was barely noticed. Attempts at publicity, such as the mass mailing of postcards to physicians, failed to generate sales. However, the media attention that was about to unfold began to increase public awareness of AA, and sales of the Big Book slowly increased (Kurtz and White 2003). AA experienced local and national

membership surges in the 1940s that were largely generated by media coverage.

Most prominent of these were the September 1939 article on AA in *Liberty Magazine*, a 1939 series in the *Cleveland Plain Dealer*, and newspaper sports-page coverage of the spring 1940 announcement that the Cleveland Indians star catcher had joined AA. This early visibility was followed by a *Saturday Evening Post* article in March 1941, considered the most important single piece of media coverage that contributed to the growth of AA. Its membership grew from 2,000 members to 8,000 members in that year alone (White and Kurtz 2008).

In June 1944, publication of AA's unofficial but significant periodical, *The AA Grapevine*, initially began as a means of keeping in touch with AA members in the Armed Forces during World War II. During the post-war era, the magazine began to serve the purpose of offering a forum in which the variety of AA and recovery experiences could be presented and discussed. Over the first decade of its existence, the fellowship of AA grew from two members to 12,986 members and 556 AA groups.

The Twelve Traditions of AA were first disseminated during the first international convention of AA, held in Cleveland, Ohio, in 1950. They represented the general guidelines that were meant to preserve the organizational integrity of AA. In 1950, AA membership exceeded 96,000 and local groups numbered more than 3,500 (White and Kurtz 2008).

Not all of Bill Wilson's ideas to grow the organization were met with great acceptance. According to the New York State Office of Alcoholism and Substance Abuse Services, in 1940 Bill Wilson brought two African American men to an AA meeting in New York City and was sharply criticized by some attendees for his attempt at racial integration (New York State OASAS 2011).

Early Outcomes

In the earlier days of AA, many alcoholics who desired sobriety required hospital-based detoxification due to the severity of their addiction. Those who could make the trip to Akron, Ohio, were put under the care of Dr. Bob Smith, but many could not travel to Akron. Hospitals were still reluc-

tant to admit alcoholics because they did not pay their bills. Sponsorship in AA actually began by another man who promised to pay the detoxification hospital bill if a new AA recruit failed to do so. Eventually the AA sponsor would assume a much more comprehensive role in the sobriety of the new member (Kurtz and White 2003).

During the first few years of AA, several physicians in Philadelphia began keeping track of patients they knew who either attempted to get sober or had obtained sobriety in AA. In 1937, Dr. Silkworth and Bill Wilson concurred that AA was unlikely to work for around half of those who tried it; however, the data gathered in Philadelphia suggested a more positive result with roughly 50% achieving abstinence during their initial ninety days of involvement. Another 25% eventually achieved sobriety in AA after a period of relapse. The final 25% appeared to be beyond the help of AA. They also observed that those who made it were persons who had come to realize they needed AA, were highly motivated, and “really tried” to get it (Kurtz and White 2003).

AA Hits Its Stride, 1951–1970

The early 1950s were marked by two developments that strengthened the growing momentum of AA. The first was the large-scale social acceptance of AA in the United States. The second was the publication of the book *Twelve Steps and Twelve Traditions*, written by Bill Wilson. This book guided and shaped the understanding of the spiritual concepts of AA among many members in the 1950s and the decades to come.

The Eisenhower decade of the 1950s proved to be an ideal backdrop for the widespread acceptance of the spiritual rather than religious program of AA. Among the many events reflecting cultural acceptance of AA included AA winning the 1951 Lasker Award. (The Lasker Awards, administered by the Lasker Foundation, have been awarded annually since 1946 to living persons who have made major contributions to medical science or who have performed public service on behalf of medicine. The awards are sometimes referred to as America’s Nobel Prizes.)

The congratulatory telegram sent to AA by President Dwight Eisenhower on its twentieth-year Coming of Age convention in 1955, and the regular

recommendations given to the readers of advice columnists Ann Landers and Dear Abby, also contributed to a more widespread cultural acceptance of AA. In addition, the movies *Smash-Up* and *The Lost Weekend*, followed by *Days of Wine and Roses*, reflected a cultural awareness of alcoholism by their very creation. In 1967, the American Medical Association stated that AA involvement remained the most effective means of treating alcoholism (Menninger quoted in Alcoholics Anonymous World Services, Inc., n.d.).

As the 1960s progressed, AA cofounder Bill Wilson suffered an increasing decline in his health largely due to emphysema, which resulted from his smoking. At the time of his death in Miami Beach on January 24, 1971, there were more than 16,000 local AA groups and more than 310,000 members. Few organizations led for so long by a charismatic leader survive his or her demise. But Alcoholics Anonymous was an exception, due to the decentralized autonomous structure mandated by the Twelve Traditions (Kurtz and White 2003).

AA During the Era of Treatment Expansion, 1970–1990

From the start, AA groups carried their experience, strength, and hope to alcoholics residing in local missions, general and psychiatric hospitals, prisons, halfway houses, sanatoriums, and various “drying out” facilities. During the middle decades of the twentieth century, individual AA members created sober sanctuaries (AA farms, AA retreats, Twelve Step houses) in communities where institutional support for recovery was deficient. AA members were also heavily represented in the leadership of newly forming alcoholism councils whose mission was to advocate the establishment of alcoholism information and referral centers, detoxification facilities, and rehabilitation programs. In the culmination of these efforts, the passage of the 1970 Comprehensive Alcoholism Prevention and Treatment Act launched the modern alcoholism treatment field by infusing federal funding into alcoholism treatment facilities. The number of treatment facilities in the U.S. rocketed from 200 in 1970 to 4,200 in 1980, and to more than 9,000 in 1990 (Kurtz and White 2003).

The majority of these emerging treatment facilities used the AA Twelve Step model, especially among programs that replicated the Minnesota

Model. Many AA members became employed as alcoholism counselors, nurses, physicians, and administrators in the growing treatment field. Concern was voiced during the mid-1970s by some professionals over the undue influence of AA on the alcoholism treatment field. However, AA was dramatically influenced by the treatment field during this period as well, most obviously by fueling the huge growth in AA membership. Between 1970 and 1980, AA membership grew from 311,450 to 907,575, with the number of local AA groups increasing from 16,459 to 42,105. By 1990, AA had further increased to 2,047,469 members in 93,914 groups. The Twelve Steps of AA were also adapted to an increasingly vast number of problems and conditions, and the concepts of addiction and recovery were applied to other processes in addition to substances. Recovery became something of a cultural phenomenon (Kurtz and White 2003).

As a growing percentage of AA members entered AA while in treatment or were coerced to attend through the criminal justice system, concern within AA was raised over the prospect of the infusion of a secular, pop-psychology influence that would displace the language and elements of the classic Alcoholics Anonymous insight and approach. The fellowship responded by reasserting the importance of the Twelve Traditions, and releasing new literature and guidelines distinguishing and defining the differences between AA and treatment. There also emerged within AA a fundamentalist movement to recapture the spiritual practices of the earlier days of the organization (Kurtz and White 2003).

Criticism of AA

Public criticism of AA was first observed with a 1964 magazine article by psychologist Arthur Cain, in which he argued that AA had become anti-science, dogmatic, and cult-like (Kurtz 1979). This laid the groundwork for subsequent attacks over the following decades. Such criticisms were usually part of a broader attack on the disease concept (erroneously attributed to AA) and of alcoholism treatment. Some of the critics advocated alternate organizations to AA, most notably the secular recovery approaches of Women for Sobriety, Secular Organization for Sobriety, Rational Recovery, and Moderation Management. By the mid-1980s, an extremist faction of

critics aggregated into something resembling a countermovement with their own circuit speakers, publishing genre, and websites with names such as AA Kills, AA Deprogramming, and Recovery Liberation.

Despite the diversity of sources generating criticism of AA, five common themes pervaded their attacks. They were

- AA was ineffective or lacked scientific proof of effectiveness,
- AA helped only some types of alcoholics and may harm others,
- the religious ideas and language of AA discouraged many alcoholics from seeking help,
- AA was just a substitute dependence, and
- AA impeded the scientific advancement of alcoholism treatment (Kurtz and White 2003).

Just in the past decade, many of these arguments have been debunked by the quality and quantity of scientific research on AA.

Birth of Modern Alcoholism Treatment, Mid-Twentieth Century

Substance abuse treatment programs evolved to meet the needs of patients who were not successful at establishing recovery solely through Twelve Step meetings (Brigham 2003). The birth and expansion of modern community-based treatment programs for alcohol and drug dependence was facilitated by five concepts that greatly influenced public opinion and legislative policy:

1. Alcoholism is a disease.
2. The alcoholic is a sick person.
3. The alcoholic can be helped.
4. The alcoholic is worth helping.
5. Alcoholism is our number four public health problem, and our public responsibility (Mann 1944; White 2004).

During the 1940s and 1950s several institutions pioneered new approaches to alcohol-related problems. Their collective efforts, including those of Alcoholics Anonymous and its professional friends who restored optimism that long-term sobriety could be achieved, were termed the Modern Alcoholism Movement (White 2004). Some of them include the following:

- The Research Council on Problems of Alcohol promised a new scientific approach to the prevention and management of alcohol problems.
- The Yale Center of Studies on Alcohol conducted alcoholism research, educated professionals, established an outpatient clinic model, and promoted occupational programs for alcoholism.
- The National Committee for Education on Alcoholism, founded by Mrs. Marty Mann in 1944, waged a relentless public education campaign about alcoholism and encouraged local communities to establish detoxification and treatment facilities. Mrs. Mann, referred to as the First Lady of Alcoholics Anonymous, was perhaps the single most influential figure in this advocacy movement that laid the foundation for modern addiction treatment (White and Schulstad 2009).

The success of the Modern Alcoholism Movement in changing the public perception of alcoholism is shown by the percentage of U.S. citizens who viewed alcoholism as an illness, which increased from 6% in 1947 to 66% in 1967, and by the number of new professional organizations studying alcoholism (White 2004).

The Minnesota Model

By the time the thirteen-year reign of prohibition ended in 1933, most alcoholics were detoxified and institutionalized with the chronically mentally ill in the locked wards of state psychiatric hospitals. Conditions were often poor, and the custodial system of care typically resulted in revolving-door cycles of admission, detoxification, release, relapse, and readmission (Slaymaker and Sheehan 2008).

The model that most represents the archetype of modern alcoholism treatment emerged from the synergy of three programs in Minnesota: Pioneer House (1948), Hazelden (1949), and Willmar State Hospital (1950). This model, termed the Minnesota Model, drew heavily on the experience of AA members in its conceptualization of alcoholism (White 2000a). As articulated by its early proponents—Dr. Nelson Bradley, Dr. Dan Anderson, Reverend John Keller, and Reverend Gordon Grimm—the Minnesota Model defined alcoholism as a primary, progressive disease that could not be cured but could be arrested with lifelong abstinence. These proponents also emphasized the importance of treating the alcoholic and addict patients with dignity and respect, the importance of a mutually supportive treatment environment, utilization of a multidisciplinary treatment team and a full continuum of services, and integration of the Twelve Steps and social support of AA during and following treatment (White 2003).

The Minnesota Model blended AA concepts and philosophy with professional approaches, such as group and individual counseling. The addition of the alcoholism counselors, many of whom were recovering AA members, was a key ingredient in aligning a closely identified professional with the alcoholic to foster integration of Twelve Step principles and practices in everyday life. The psychiatric services, heavily influenced by psychoanalysis, that had been the prevailing mode of therapy were abandoned in favor of an emphasis on patient education, therapeutic group process, peer interaction, and the development of lifelong support systems through AA (Slaymaker and Sheehan 2008).

Hazelden

Hazelden was conceived in an era when alcoholics languished in the “drunk tanks” of city and county jails, and in the back wards of aging state psychiatric hospitals. Few resources were available for any alcoholic, rich or poor. The Hazelden treatment center opened in Center City, Minnesota, following extended discussions about the need for an alcoholism treatment facility for priests and business executives. Initial financial support came from the Catholic Diocese and contributions from local businesses. The first residents experienced a formal program with very simple directives:

make your bed, conduct yourself as a gentleman, attend the daily lectures on the Twelve Steps of AA, and talk with one another (White 2003).

Hazelden was able to grow and evolve due in large part to the financial resources of Emmet, Patrick, and Lawrence Butler, whose combined largesse sustained Hazelden through its early years. Patrick himself had been a Hazelden patient in 1949. During the 1950s, Hazelden, as well as Pioneer House and Willmar State Hospital, exerted an enormous influence on the evolution of addiction treatment that continued through the second half of the twentieth century (White 2003).

The 1950s also marked the beginning of AA's profound and widespread influence on alcoholism treatment as the Minnesota Model was replicated nationally and worldwide over the next several decades. To avoid the potential for a mistaken impression of affiliation between AA and professional alcoholism treatment, AA discouraged the use of its name in the names of institution or professional titles used by treatment centers (Alcoholics Anonymous, n. d.; White and Kurtz 2008).

Expansion of Treatment and Then Backlash

In the U.S., modern treatment approaches received a considerable boost from substantial growth in AA membership. The impetus for treating alcohol dependence as a disease rather than a moral problem grew out of the AA philosophy that individuals were not responsible for becoming dependent upon alcohol, but were responsible to do something about it once it developed (Trice and Staudenmeier 1989).

During the 1960s, alcoholism services grew through federal funding from the National Institute of Mental Health (NIMH) and the Office of Economic Opportunity. In 1970, the decades-long campaign of the Modern Alcoholism Movement culminated in the passage of the Comprehensive Alcoholism Prevention and Treatment Act. This legislative milestone (often termed the Hughes Act for its champion, Senator Harold Hughes of Iowa) created the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to lead a federal, state, and local partnership to build, staff, operate, and

evaluate community-based alcoholism treatment programs across the U.S. The number of alcoholism programs in the U.S. jumped astonishingly from a few hundred in 1970 to more than 4,200 programs by 1980 (White 2004).

It appeared then that many of the goals of the Modern Alcoholism Movement were being achieved. The movement had extended its influence into major cultural institutions that included the media, law, medicine, religion, education, business, and labor. There was growing professional and public acceptance of alcoholism as a disease. The country had established national institutes that funded and advocated medical research on addiction and public health approaches to alcohol and other drug-related problems. The disease concept was also applied to a wide spectrum of other drugs and behaviors as recovery became something of a cultural phenomenon. There was also an explosion in the growth of treatment programs based on the disease concept (White 2000a), spurred in large part by the decision of many insurance companies to begin offering alcoholism treatment benefits (White 2004).

However, during the very peak of the expansion in treatment services and facilities, a backlash began to develop. It came in two forms. The first was a financial response against the treatment industry. The prototypical twenty-eight-day inpatient treatment programs that had been the standard of care were hardest hit (White 2004). The dominance of managed care and of aggressively managed behavioral health care by the end of the 1980s led to the severely curtailed reimbursement for chemical dependency services. Insurance providers only paid then for what was deemed medically necessary. This resulted in third-party payment for three to six days of treatment instead of twenty-eight days (John Curtiss, pers. comm.), leading to a massive number of closures of chemical dependency treatment programs from the period of 1988 to 1993.

The surviving hospitals and clinics that continued to offer chemical dependency services often had to shift their emphasis from inpatient to outpatient services, or to the identification and treatment of co-occurring psychiatric and behavioral disorders in order to receive insurance reimbursement (John Curtiss, pers. comm.; White 2004). The net result has been a dramatic reduction in the availability and accessibility of chemical

dependency services as the number of persons needing help continues to climb (John Curtiss, pers. comm.).

The second backlash was ideological, and came in the form of philosophical and scientific attacks on the disease concept and the treatment programs based on it. Some of the more prominent examples include *Heavy Drinking: The Myth of Alcoholism as a Disease* (Fingarette 1989), *The Diseasing of America* (Peele 1989), *The Myth of Addiction* (Davies 1992), and *Addiction Is a Choice* (Schaler 2000). The twentieth century ended without popular or professional consensus or a resolution strategy on the nature of alcohol and other drug problems (White 2000b; White 2001a).

In response to the intense attacks on the disease basis of addiction, the National Institute on Drug Abuse (NIDA) began a decade-long research and public education campaign to re-educate the public about the nature of addiction. The first manifestation of this campaign was the 1997 article by Dr. Alan Leshner, then director of NIDA, published in one of the world's leading scientific journals entitled "Addiction is a Brain Disease, and It Matters" (Leshner 1997). Adding momentum to the "addiction is a brain disease" campaign was a 2005 special issue of *Nature* entitled "Focus on the Neurobiology of Addiction" (2005), in which a distinguished group of scientists assembled the latest evidence that addiction at its most fundamental essence is a neurobiological disorder.

Two years later in 2007, NIDA director Dr. Nora Volkov presented the historic lecture "The Neurobiology of Free Will," at the American Psychiatric Association's annual conference. This lecture revealed a maturing in the understanding of addiction as a brain disease, and contained the most complex and comprehensive description to date of how continued alcohol and other drug use selectively and progressively alters multiple brain regions to result in substance use eclipsing all other familial and social needs of the individual (White 2007b).

The media—with Bill Moyers's 1998 PBS special, *Moyers on Addiction: Close to Home*; the 2007 HBO special *Addiction: Why Can't They Just Stop?*; and *Time Magazine's* July 16, 2007, cover story "How We Get Addicted"—has also been instrumental in transmitting these scientific findings to the public (White 2007b).

Although many recovery advocates have celebrated these scientific discoveries, some have made the point that emphasizing the chronic brain disease aspect is unlikely to reduce the stigma surrounding alcoholism and drug addiction unless it is accompanied by two companion communications: (1) With abstinence and proper care, addiction-induced brain impairments reverse themselves, and (2) millions of individuals have achieved long-term recovery and are leading healthy, meaningful, and productive lives. Including these additional messages is important because the public may construe the term *chronic* as meaning “forever” and “hopeless” (White 2007b).

CHAPTER 2

The Demographics of Alcohol Abuse and Alcoholism

Many different terms have been used by professionals, patients, and the media to describe drinking patterns and alcohol problems. Therefore, a useful place to begin our discussion of alcohol and alcoholism is to clarify the terms and definitions that the reader will frequently encounter in reading this book.

Definitions of Drinking Patterns

Many people think that since whiskey is stronger, with a higher alcohol content than beer or wine, then drinking either of these wouldn't be as intoxicating as drinking hard liquor. So, instead they may drink three or four beers and believe they aren't as intoxicated as if they just had the same number of shots of whiskey.

To clarify this and for the purpose of consistency, alcohol researchers and public health officials have created the concept of a *standard drink*. A standard drink takes into account the different concentrations of alcohol in different beverages and is defined by the following (NIAAA 2008):

Standard drink: one standard drink equals

- 12 ounces of beer or wine cooler
- 8–9 ounces of malt liquor
- 5 ounces of table wine
- 3–4 ounces of fortified wine
- 2–3 ounces of cordial, liqueur, or aperitif
- 1.5 ounces (one shot) of brandy
- 1.5 ounces (one shot) of 80-proof distilled spirits

Moderate alcohol use is defined as up to two drinks per day for men and one drink per day for women and older persons. For most adults, drinking alcohol at this level causes few if any problems (NIAAA 2007a). Drinking becomes excessive, and is termed high-risk or hazardous drinking, when it causes or elevates the risk for alcohol-related problems or complicates the management of other health problems.

High-risk or hazardous drinking for men is more than four standard drinks in a day (or more than fourteen per week), and for women is more than three drinks in a day (or more than seven per week). Epidemiologic research has found this level of alcohol use to significantly heighten the risk for alcohol-related problems (Dawson, Grant, and Li 2005).

Heavy drinking is defined as five or more drinks in a day at least once a week for males, and four or more for females (NIAAA 2007a).

Binge drinking is defined as drinking five or more drinks on the same occasion (SAMHSA 2008a).

Explore or encourage your clients to explore the following NIAAA website for more information about “How Much Is Too Much?” drinking: <http://rethinkingdrinking.niaaa.nih.gov/WhatCountsDrink/HowMuchIsTooMuch.asp>.

Hazelden, a national nonprofit organization founded in 1949, helps people reclaim their lives from the disease of addiction. Built on decades of knowledge and experience, Hazelden offers a comprehensive approach to addiction that addresses the full range of patient, family, and professional needs, including treatment and continuing care for youth and adults, research, higher learning, public education and advocacy, and publishing.

A life of recovery is lived “one day at a time.” Hazelden publications, both educational and inspirational, support and strengthen lifelong recovery. In 1954, Hazelden published *Twenty-Four Hours a Day*, the first daily meditation book for recovering alcoholics, and Hazelden continues to publish works to inspire and guide individuals in treatment and recovery, and their loved ones. Professionals who work to prevent and treat addiction also turn to Hazelden for evidence-based curricula, informational materials, and videos for use in schools, treatment programs, and correctional programs.

Through published works, Hazelden extends the reach of hope, encouragement, help, and support to individuals, families, and communities affected by addiction and related issues.

For questions about Hazelden publications, please call **800-328-9000**
or visit us online at **hazelden.org/bookstore**.

As a result of high-quality, groundbreaking scientific research in the last decade, we've experienced enormous leaps in our knowledge of alcoholism and its treatment, including advancements in understanding the biological basis of alcoholism and the effectiveness of existing treatments and their outcomes. Written for treatment and behavioral health professionals, students, and serious lay readers, *Alcohol: Its History, Pharmacology, and Treatment* addresses today's issues and complex concepts thoroughly and accessibly.

Authors Mark Edmund Rose, M.A., and Cheryl J. Cherpitel, Dr.P.H., bring forth the most up-to-date information on alcoholism and alcohol-related problems. They take an extensive look at the broader societal impact of alcohol, including the history of alcohol use and treatment in the United States, the demographics of alcohol abuse, and the science of alcohol and alcoholism. They then discuss issues in treatment, including withdrawal and its management, Twelve Step groups, and self-help therapy. Included is an in-depth exploration of our dramatically changing approach to the disease concept of alcoholism and how new research is teaching us to use available therapies more effectively.

Mark Edmund Rose, M.A., is a licensed psychologist and addiction researcher. He co-authored *Prescription Painkillers: History, Pharmacology, and Treatment* with Marvin Seppala, M.D., in 2010.



Cheryl J. Cherpitel, Dr.P.H., is an internationally recognized alcohol researcher, the associate director of the National Alcohol Research Center, and a senior scientist at Alcohol Research Group.



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