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## **Addiction Medicine in America: Its Birth and Early History (1750-1935) with a Modern Postscript**

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The recent recognition of addiction medicine as a medical specialty obscures the fact that American physicians have been involved in the treatment of severe and persistent alcohol- and other drug-related problems for more than two centuries. This article describes the birth of addiction medicine in the late 18<sup>th</sup> century, the professionalization of addiction medicine in the second half of the 19<sup>th</sup> century, and the virtual collapse of addiction medicine as an organized specialty in the opening decades of the 20<sup>th</sup> century. The review includes early pioneers of addiction medicine, conceptual and clinical breakthroughs, the evolving settings in which addiction medicine was practiced, the larger currents in American medicine, and the evolving social policies that influenced the early practice of addiction medicine.

### **The Birth of Addiction Medicine**

The roots of addiction medicine began not in a young America but in the ancient civilizations of Africa and Europe. Special methods to care for those addicted to alcohol were developed in ancient Egypt, and references to chronic drunkenness as a sickness that enslaved body and soul date to Heroditus (fifth century BC), Aristotle (384-322 BC), and Seneca (4 B.C.-65 AD). St. John Chrysostom (1<sup>st</sup> Century, AD) provided one of the earliest comparisons of chronic alcohol inebriety to other diseases (1). These earliest intimations of the concept of addiction and its treatment reflect the fleeting observations of individuals rather than an organized cultural response to alcohol and other drug problems.

The earliest American medical responses to alcoholism emerged within the systems of medicine practiced by Native American tribes. Alcohol-related problems rose dramatically in Native America as alcohol became increasingly used as a tool of economic, political, and sexual exploitation in the 18<sup>th</sup> and early 19<sup>th</sup> centuries (2, 3). Native tribes actively resisted these problems through

political/legal advocacy, organizing sobriety-based cultural revitalization movements, and through the medical treatment of those affected. Native American healers used botanical agents to suppress cravings for alcohol (hop tea), to induce an aversion to alcohol (the root of the trumpet vine), and to facilitate personal transformation within sobriety-based cultural and religious revitalization movements (4).

In Colonial America, there was pervasive consumption of alcoholic beverages, but no recognition of excessive drinking as a distinct medical problem (5). This changed in response to increased alcohol consumption (a near tripling of annual per capita alcohol consumption between 1780 and 1830), a shift in preference from fermented to more potent forms of distilled alcohol, and the emergence of a pattern of socially disruptive “frontier drinking” (6, 7). It was in this changing context that several prominent Americans “discovered” the phenomenon of addiction (8).

In 1774, the philanthropist and social reformer Anthony Benezet published a treatise, *Mighty Destroyer Displayed*, that recast alcohol from its status as a gift from God to that of a “bewitching poison.” He noted the presence of “unhappy dram-drinkers bound in slavery” and observed that drunkenness had a tendency to self-accelerate: “Drops beget drams, and drams beget more drams, till they become to be without weight or measure” (9).

Benezet’s warning was followed by a series of publications by Dr. Benjamin Rush (1746-1813). Rush’s work is particularly important given his prominence in Colonial society and his role in the history of American medicine and psychiatry. Rush’s 1784 pamphlet, *Inquiry into the Effects of Ardent Spirits on the Human Mind and Body*, was the first American treatise on alcoholism, and it almost single-handedly launched the American temperance movement. In this pamphlet, Rush catalogued the symptoms of acute and chronic drunkenness, described the progressiveness of these symptoms, and suggested that chronic drunkenness was a “disease induced by a vice”(10). Rush was the first prominent physician to claim that many confirmed drunkards could be restored to full health and responsible citizenship through proper medical treatment and to call for the creation of a special facility (a “Sober House”) to care for the drunkard (11).

Rush’s writings were mirrored in the work of physicians in other countries, most notably the Edinburgh physician, Dr. Thomas Trotter, whose 1788 publication, *Essay, Medical Philosophical, and Chemical, on Drunkenness and its Effects on the Human Body*, shared many of Rush’s ideas (12). Another contribution that influenced the subsequent development of addiction medicine in America was the work of Christopher Wilhelm Hufeland, who in 1819 described a

clinical condition characterized by uncontrollable cravings for alcoholic spirits that triggered periodic “drink storms.” Hufeland labeled this condition *dipsomania*. During the same decade, Lettsom, Armstrong, and Pearson described the condition that Thomas Sutton subsequently christened *delirium tremens* (13).

By the late 1820s, the subject of chronic drunkenness was taken up in a number of medical dissertations. Most notable among these were the works of Drs. Daniel Drake and William Sweetser. Drake speculated on the causes of “habitual drinking,” elaborated on Rush’s list of systems of the body effected by alcohol, and hinted at what would later become the concepts of *inability to abstain* and *loss of control* (“...the habit being once established, he will not, I almost say cannot, refrain”) (14). In 1828, Sweetser provided a detailed account of the pathophysiology of chronic alcohol intoxication, including depictions of the addictiveness of alcohol and the potential role of heredity in chronic drunkenness. He concluded that intemperance created a “morbid alteration” in nearly all the major structures and functions of the human body. Cycles of compulsive drinking were viewed by Sweetser as the product of a devastating paradox: the poison (alcohol) was itself its only antidote (15).

The 1827 publication of the Reverend Lyman Beecher’s *Six Sermons on the Nature, Occasion, Signs, and Remedy of Intemperance* exerted their own influence on the emerging concept of addiction. Bridging the gap between moral and medical models, Beecher described the intemperate as being “addicted to the sin” and suffering from an “insatiable desire for drink.” Beecher provided two other contributions to this developing concept. First, he described the early warning signs of addiction, linking these to the later signs that Rush, Drake, Sweetser, and others had catalogued. Second, he challenged these very physicians who, in the case of Rush, had tried to get their patients to moderate their drinking by switching from distilled alcohol to fermented drinks such as wine or beer. Beecher’s declaration, “There is no remedy for intemperance but the cessation of it” marked the call for complete abstinence as a personal and social strategy for the resolution of alcohol problems (16).

Between 1774 and 1829, America “discovered” addiction through the collective observations of her physicians, clergy, and social activists. There was an emerging view that chronic drunkenness was a problem with biological roots and consequences and thus the province of the physician. These earliest pioneers declared that chronic intoxication was a diseased state, and they articulated the major elements of an addiction disease concept: biological predisposition, drug toxicity, pharmacological tolerance, disease progression, morbid appetite (craving), loss of volitional control of alcohol/drug intake, and the pathophysiological

consequences of sustained alcohol and opiate ingestion. While their treatments could involve such “heroic” methods as purging, blistering, bleeding, and the use of highly toxic medicines, they also used surprisingly modern strategies (e.g., aversive conditioning) and recognized many pathways to the initiation of sobriety, e.g., from religious conversion to witnessing an alcohol-related death. The writings of this period portray addiction recovery not as an enduring process but as a climactic decision. This view focused the attention of the emerging temperance movement on the pledge of lifetime abstinence (from distilled alcohol) as a central strategy in their early attempts at rescue work with confirmed drunkards.

Addiction medicine emerged in the shift from treating medical consequences of alcohol addiction to treating the addiction itself. The earliest practice of addiction medicine predated institutional treatment and was practiced out of the private offices of individual physicians. Alcohol was not the only drug of concern to these physicians. During the 16<sup>th</sup> and 17<sup>th</sup> centuries, physicians in Germany, Holland, Portugal, and England had begun to conceptualize opium as “a kinde of poison” that required regular and increasing use that, when stopped, created a unique sickness that drove people to return to the drug (17). In 1701, the English physician, John Jones, provided an exceptionally detailed account of opiate withdrawal in his book, *The Mysteries of the Opium Reveal’d* (18). Three events between the early and mid-nineteenth century profoundly altered the future of narcotic addiction in America: the isolation of morphine from opium, the introduction of the hypodermic syringe, and the emergence of a patent drug industry. These events produced drugs of greater potency, created a more efficient and euphorogenic method of drug ingestion, and increased the availability and promotion of powerful psychoactive drugs (19, 20).

### **Early Professionalization and Medical Advancements (1830-1900)**

In 1828, Dr. Eli Todd, superintendent of the Hartford Retreat for the Insane, called for the creation of a physician-directed inebriate asylum. Under his influence, the Connecticut State Medical Society passed a resolution supporting this idea in 1830 (21). A year later, Dr. Samuel Woodward, Superintendent at the Hospital for the Insane at Worcester, Massachusetts, wrote a series of influential essays echoing the Connecticut recommendations. He declared:

*A large proportion of the intemperate in a well-conducted institution would be radically cured, and would again go into society with health reestablished, diseased appetites removed, with principles of temperance well grounded and thoroughly understood, so that they would be afterwards safe and sober men (22).*

Woodward argued that intemperance was a physical disease requiring medical remedies and, breaking with Rush, declared that “the grand secret of the cure for intemperance is total abstinence from alcohol in all its forms” (22). This total abstinence position was given greater weight in light of the failed efforts to cure drunkards through the use of public pledges to refrain only from distilled alcohol. The number of drunkards who continued their debauchery through fermented alcoholic drinks contributed to the temperance movement’s shift from the partial pledge to the T-total pledge (23).

What followed in the 1830s and 1840s was a series of clinical contributions to the understanding of chronic drunkenness that exerted considerable influence on the emerging field of addiction medicine (24). First, there were new experiments and clinical observations on the pathophysiology of alcohol such as those of Prout, Beaumont, and Percy on the effects of alcohol on the stomach and the blood (25). Dr. Robert Macnish’s *Anatomy of Drunkenness* (1835) offered one of the earliest typologies of alcohol addiction, noting seven clinical subtypes (26). Macnish also referenced a subject that continued as a medical controversy for much of the 19<sup>th</sup> century: the claimed spontaneous combustion of alcohol inebriates. (27, 28).

In 1838, France’s leading expert on drunkenness, Dr. Esquirol, argued that the disease of intemperance was a “monomania”—a “mental illness whose principle character is an irresistible tendency toward fermented beverages” (29). This was followed in 1840 by Dr. R.B. Grinrod’s text, *Bacchus*, in which he declared, “I am more than ever convinced that drunkenness is a disease, physical as well as moral, and consequently requires physical as well as moral remedies” (30, 31, 32).

One of the most significant milestones in the history of addiction medicine was the 1849 publication of Magnus Huss’ text, *Chronic Alcoholism*. After an extensive review of the chronic effects of intoxication, Huss declared:

*These symptoms are formed in such a particular way that they form a disease group in themselves and thus merit being designated and described as a definite disease...It is this group of symptoms which I wish to designate by the name Alcoholismus chronicus (33, 34).*

Huss’ text stands as the landmark addiction medicine text of the mid-19th century. It contributed a clinical term—*alcoholism*—that came into increasing medical and public popularity in the transition between the 19<sup>th</sup> and 20<sup>th</sup> centuries.

The Washingtonian Revival of the 1840s and the fraternal temperance societies and reform clubs that followed brought the issue of recovery from alcoholism onto center cultural stage. Local Washingtonian groups encountering “hard cases” needing more than an occasional sobriety support meeting began organizing lodging houses that evolved into America’s first addiction treatment institutions. A multi-branched treatment field emerged in the mid-19th century.

Inebriate homes emerged out of alcoholic mutual aid societies that viewed addiction recovery as a process of moral reformation (35). There were medically-directed inebriate asylums, the first of which was the New York State Inebriate Asylum, chartered in 1857 and opened in 1864, under the leadership of Dr. Joseph Turner (36, 37). There were also privately franchised, for-profit addiction cure institutions such as the Keeley, Neal, Gatlin, and Oppenheimer Institutes. These institutions generated considerable controversy over their claim to have medicinal specifics that could cure addiction (38) and their practice of hiring physicians who were in recovery from addiction (39, 40). Inebriate homes and asylums and the private addiction cure institutes competed with bottled patent medicine addiction cures (most containing alcohol, opium, morphine, or cocaine), some of which were promulgated by physicians, and religiously sponsored inebriate colonies and rescue missions (21). By the late 1870s, large urban hospitals, such as Bellevue Hospital in New York City, had also started opening inebriate wards (41). Annual alcoholic admissions at Bellevue rose to 4,190 by 1895—a number that continued to climb to more than 11,300 per year in the opening decade of the 20<sup>th</sup> century (21).

In 1870, Dr. Joseph Parrish led the creation of the American Association for the Cure of Inebriety (AACI), which brought together the heads of America's most prominent inebriate homes and asylums. The AACI by-laws posited that: *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* (42). The AACI held regular meetings to exchange ideas and published the first specialized medical journal on addiction—the *Journal of Inebriety*. The *Journal*, edited by Dr. T.D. Crothers during its entire publication life (1876-1914), was filled with essays by addiction medicine specialists and with advertisements promoting various treatment institutions (43, 44). A similar inebriety treatment movement was under way in Europe during the last decades of the 19<sup>th</sup> century, and the first international meetings of addiction medicine specialists were held during this period (45).

American physicians specializing in addiction began releasing texts on the nature of addiction and their treatment methods in the 1860s: Dr. Albert Day's *Methomania: A Treatise on Alcoholic Poisoning* and Dr. W. Marcet's *On Chronic Alcoholic Intoxication*. The production of such literature virtually exploded in the 1880s and 1890s. Among the most prominent texts either written in America or that exerted a significant influence on the practice of addiction medicine in America during this period were Dr. H.H. Kane's *Drugs That Enslave: The Opium, Morphine, Chloral and Hashish Habits*, Dr. Fred Hubbard's *The Opium Habit and Alcoholism*, Dr. Joseph Parrish's *Alcoholic Inebriety: From a Medical Standpoint*

with Cases from Clinical Records, Dr. Asa Meyerlet's *Notes on the Opium Habit*, Dr. T.L. Wright's *Inebriism*, Franklin Clum's *Inebriety: Its Causes, Its Results, Its Remedy*, Dr. T.D. Crothers' *The Disease of Inebriety from Alcohol, Opium and Other Narcotic Drugs*, Dr. Norman Kerr's *Inebriety or Narcomania: Its Etiology, Pathology, Treatment and Jurisprudence*, and Dr. Charles Palmer's *Inebriety: Its Source, Prevention, and Cure* (21).

The central organizing concept of 19<sup>th</sup> century addiction medicine specialists was that of *inebriety*. Inebriety was viewed as a disease that manifested itself in numerous varieties. These varieties were meticulously detailed by clinical subpopulation and drug choice. Addiction medicine texts were often organized under such headings as *alcoholic inebriety*, *opium inebriety*, *cocaine inebriety*, and *ether inebriety*. Inebriety was viewed as a disease that sprang from multiple etiological pathways, unfolded in many diverse patterns, and had a variable course and outcome. Inebriety specialists talked eloquently about the need to individualize treatment and by the 1880s, had begun to recognize and study the problem of post-treatment relapse (46).

The treatment methods of the two physician-directed branches of the inebriety movement (the inebriate asylums and the private addiction cure institutes) were quite different, and the conflicts between these branches reflected allopathic and homeopathic approaches to medicine in this period. The inebriate asylum physicians advocated a sustained (1-3 years), legally enforced course of treatment that consisted of drug-assisted detoxification, collateral medical treatments, and a sustained period of institutional convalescence. The addiction cure institute physicians boasted medicinal specifics (daily hypodermic injections and liquid tonics) that could “unpoison” the addict’s cells, destroy the craving and compulsion to use alcohol, opiates, and cocaine—all in four short weeks—cash in advance. Drug treatments within both branches included such substances as cannabis, cocaine, chloral hydrate, paraldehyde, strychnine, atropine, hyoscin, and apomorphine. While some addiction medicine specialists used cocaine as a tonic during detoxification, most warned of the addictive properties of the drug (21).

Most inebriate asylums and addiction cure institutes treated all drug addictions while others, such as Dr. Jansen Mattison's Brooklyn Home for Habitues (opened in 1891), specialized in the treatment of opiate and cocaine addiction (47). The inebriety literature of this period is filled with debates over whether medically-supervised opiate withdrawal should be abrupt, rapid (over days), or sustained (over weeks and months). One also finds discussions of such contemporary issues as the addictiveness and psychological toxicity of cocaine, problems of drug substitution, and the management of the relapsed patient (45).

Understanding of the potential physiological foundations and consequences of addiction increased during the last two decades of the 19<sup>th</sup> century. Carl Wernicke's 1881 discovery of a psychosis with polyneuritis that resulted from chronic alcoholism and Sergei Korsakoff's 1887 description of an alcoholism-induced psychosis characterized by confusion, memory impairment, confabulation, hallucinations, and stereotyped and superficial speech both underscored the potential organic basis of alcoholic behavior. There was considerable discussion about the potential hereditary transmission of inebriety, as there is today. Between 1899 and 1903, there were also antibody theories of alcoholism that led to experiments with an alcoholism vaccine called *equizine* (48).

A new addiction-related medical society was founded in 1891. The American Medical Temperance Association (AMTA) was formed in Washington, D.C. at the annual meeting of the American Medical Association. Dr. N.S. Davis of Chicago was its founder and first president. The AMTA published the *Bulletin of the American Medical Temperance Association* under the editorship of Dr. J. H. Kellogg, Director of the Battle Creek Sanatorium. (49).

In summary, the field of addiction medicine experienced professionalization and specialization between 1830 and 1900. There were many addiction medicine pioneers who founded medically-directed treatment institutions, men such as Turner, Parrish, Crothers, Day, and later, Dr. Agnes Sparks, one of the first female physicians specializing in addiction medicine. The practice of addiction medicine shifted from the private physician's practice to the institutional setting. Within this institutional practice, there was a growing understanding of the physiological consequences of chronic alcoholism and an extension of the concept of inebriety to embrace dependence upon opium, morphine, cocaine, chloral hydrate, chloroform, and ether. There was a well-articulated addiction disease concept with elaborate protocol for detoxification and rehabilitation, although there was considerable conflict between allopathic and homeopathic approaches to addiction treatment.

The growing field of addiction medicine was infused with optimism in the early 1890s. Dr. T.D. Crothers proclaimed, "The future looks promising, and it is believed that the public will support inebriate asylums with increasing generosity" (50). There were reasons for Crothers' optimism. There was a well-articulated disease concept of inebriety and two addiction-related medical organizations that embraced a field that had grown from a handful of specialized treatment institutions in 1870 to several hundred by the turn of the century. But forces outside the medical profession were stirring that would drive a wedge between the physician and those addicted to alcohol and other drugs.



## Demedicalization and the Collapse of Addiction Treatment (1900-1935)

There was a further profusion of addiction medicine texts in the first decade of the 20<sup>th</sup> century: J.B. Mattison's *The Mattison Method in Morphinism: A Modern and Human Treatment of the Morphine Disease*, T.D. Crothers' *The Drug Habits and their Treatment*, T.D. Crothers' *Morphinism*, and George Cutten's *The Psychology of Alcoholism*. The proliferation of addiction literature couldn't hide the fact that America's response to alcohol and other drug problems was shifting. Between 1900 and 1920, addiction treatment institutions closed in great numbers in the wake of a weakened infrastructure of the field, rising therapeutic pessimism, economic austerity triggered by unexpected depressions, and a major shift in national policy. The country turned its gaze to state and national prohibition laws as the solution to alcohol and other drug-related problems.

As inebriate homes and asylums and the private addiction cure institutes closed in tandem with the spread of local and state prohibition laws, alcoholics were relegated to other institutions. These included the "foul wards" of large city hospitals, the back wards of aging state psychiatric asylums, and the local psychopathic hospital, all of which did everything possible to discourage the admission of alcoholics. Wealthy alcoholics/addicts sought discrete detoxification in a new genre of private hospital or sanitarium established for this purpose. These latter institutions were known as "dip shops" (derived from the term dipsomania), "jitter joints," or "jag-farms" (21). There were also efforts to integrate medicine, religion, and psychology in the treatment of alcoholism, most notably within the Emmanuel Clinics in New England (51). For all but the most affluent, the management of the alcoholic shifted from a strategy of treatment to a strategy of control and punishment via inebriate penal colonies. The large public hospitals also bore much of the responsibility for the medical care of the chronic alcoholic (52).

The shift from viewing the alcoholic as a diseased person in need of help to a person of weak character was reflected in the medical literature of the early twentieth century. Kurtz and Kraepelin coined the term "alcohol addiction" to depict those whose will was "not strong enough to abandon the use of alcohol even if drinking causes them serious economic, social and somatic changes" (34). Addiction medicine organizations struggled in this shifting cultural climate. The American Medical Temperance Association and the American Association for the Study and Cure of Inebriety merged in 1904 to create the American Medical Society for the Study of Alcohol and Other Narcotics. In 1906, the Scientific Temperance Federation was founded by Dr. T.D. Crothers and Frances Stoddard.

The Federation published the *Scientific Temperance Journal*. A year later, the *Journal of Inebriety* merged with *The Archives of Physiological Therapy*. This marked the progressive demise of both the *Journal of Inebriety* and its parent organization. The last issue of the *Journal of Inebriety* was published in 1914, and the American Association for the Study and Cure of Inebriety collapsed in the early 1920s following passage of the Volstead Act and the subsequent sharp decline in demand for treatment. Alcohol-related problems decreased dramatically in the early 1920s but rose to pre-prohibition levels by the late 1920s (21). The Eighteenth Amendment to the U.S. Constitution transferred cultural ownership of alcohol problems from physicians to law enforcement authorities. A similar process was underway with drugs other than alcohol, but it took two decades for this shift in approach to fully emerge.

Early 20<sup>th</sup> century addiction texts by physicians such as George Pettey and Ernest Bishop boldly proclaimed that narcotic addiction was a disease, and Dr. Foster Kennedy declared that morphinism was “a disease, in the majority of cases, initiated, sustained and left uncured by members of the medical profession” (53, 54, 55). Physicians such as Dr. Charles Terry and Dr. Willis Butler had already begun operationalizing this addiction disease concept by advocating and offering clinic-directed detoxification and maintenance of incurable narcotic addicts (56, 57, 58, 59). The medical treatment of narcotic addicts was dramatically altered by passage of the Harrison Anti-Narcotic Act of 1914. This federal act designated physicians and pharmacists as the gatekeepers for the distribution of opiates and cocaine. While this law was not presented as a prohibition law, a series of Supreme Court interpretations of the Harrison Act (particularly the 1919 *Webb vs. the United States* case) declared that for a physician to maintain an addict on his or her customary dose is not in “good faith” medical practice under the Harrison Act and therefore an indictable offense (19).

There was one brief opportunity to alter the subsequent history of narcotic control policy and the history of addiction. It came in the form of the France Bill, which was introduced in Congress in 1919. This proposed legislation would have provided federal support for physician-directed, community-based treatment of narcotic addicts. The Bill did not have enough support to come to a vote. In spite of this lack of federal leadership, physicians in forty-four communities operated morphine maintenance clinics between 1919 and 1924. These clinics, which were sponsored by local health departments and even local police departments, all eventually closed under threat of federal indictment (19, 21). The Harrison Act, in effect if not intent, transferred responsibility for the care of addicts from physicians to criminal syndicates and the criminal justice system by threatening physicians

with loss of license and incarceration if they provided maintenance rather than rapid detoxification of addicts (60).

Physician culpability in the problem of narcotic addiction made it difficult for the American Medical Association (AMA) to oppose this government infringement in medical practice. In 1919, the AMA passed a resolution opposing ambulatory treatment, in effect opposing narcotic maintenance as treatment. There were, however, many physicians who became harsh critics of the Harrison Act and this new era of criminalization. Such criticism was reflected in the new addiction medicine texts that emerged in the 1920s, such as Dr. Ernest Bishop's *The Narcotic Drug Problem* and Dr. E. H. Williams' *Opiate Addiction: Its Handling and Treatment* (61, 62, 63).

The influence of psychiatry on the characterization and treatment of addiction increased in tandem with the decline of a specialized field of addiction medicine. Karl Abraham's 1908 essay, *The Psychological Relations between Sexuality and Alcoholism*, marked the shift from seeing alcoholism as a primary medical disorder to seeing the condition as a symptom of underlying psychiatric disturbance (64). Abraham's essay marked a long series of psychoanalytic writings that viewed alcoholism as a manifestation of latent homosexuality. In the mid-1920s, Public Health Service psychiatrist, Dr. Lawrence Kolb, published a series of articles challenging earlier physiological explanations of narcotic addiction. Kolb portrayed addiction as a product of defects in personality—a characterization that reflected the growing portrayal of addicts as psychopathic and constitutionally inferior (65). The first American Standard Classified Nomenclature of Disease (1933) included the diagnoses of “alcohol addiction,” “alcoholism without psychosis”, and “drug addiction” and classified these conditions as personality disorders (66).

Few institutional resources existed for the treatment of alcoholism and narcotic addiction during the 1920s and early 1930s, but the growing visibility of these problems began to generate new proposals for their management. The opening of the California Narcotics Hospital at Spadra in 1928 marked the beginning of state support for addiction treatment (67). Physicians working within the federal prison system were writing about the problems posed by a growing population of incarcerated addicts and advocating more specialized treatment of the addict (68).

There were important addiction-related research studies in the 1920s. Drs. Arthur B. Light and Edward G. Torrance conducted research on opiate addicts at the Philadelphia General Hospital under the auspices of the Philadelphia Committee for Clinical Study of Opium Addiction Research. They demonstrated

that withdrawal from opiates is not life threatening and usually not dangerous—a finding that was misused by policy-makers to withhold medical care for addicts (69). In 1928, the Bureau of Social Hygiene published Charles Terry and Mildred Pellens' work, *The Opium Problem* (70). In this important report, Terry and Pellens made a strong argument in favor of addiction maintenance as the most appropriate treatment for addicts who are not able to sustain abstinence. Their views were viciously attacked, and it would only be years later that *The Opium Problem* would be recognized as one of the best treatises on opiate addiction ever written (58).

Medical treatments for narcotic addiction in the first three decades of the 20th century continued to focus on managing the mechanics of narcotic withdrawal. Heroin was briefly used in the detoxification of morphine addicts, and its subsequent emergence as the drug of preference among addicts bred caution in the choice of any narcotic as a withdrawal agent. This fear of exposing patients to other addicting agents led to experimentation with a wide variety of non-narcotic withdrawal procedures. These procedures included various belladonna treatments (scopolamine and hyoscine) that were known to induce hallucinations, peptization treatments (sodium thiocyanate) that could induce long-lasting psychosis, sleep treatments (sodium bromide) that had a 20% mortality rate, injected Narcosan—a lipid treatment thought to eliminate toxins and stimulate new blood formation but which actually worsened withdrawal, insulin treatments that had no effect on the withdrawal process, and serum and blood therapies in which either previously drawn blood or serum (the latter drawn from induced blisters) was re-injected as a purported aid to detoxification (71, 72, 73).

The first decades of the 20<sup>th</sup> century were marked by a profound therapeutic pessimism regarding treatment of alcoholism and narcotic addiction. Biological views of addiction fell out of favor and were replaced by psychiatric and criminal models that placed the source of addiction within the addict's character and argued for the control and sequestration of the addict.

### **The Rebirth of Addiction Treatment (1935-1970)**

Following the early twentieth century collapse of systems of care for those addicted to alcohol and other drugs, addiction medicine was revived within the larger context of two movements.

The “modern alcoholism movement” was ignited by the founding of Alcoholics Anonymous (1935), a new scientific approach to alcohol problems in post-Repeal America led by the Research Council on Problems of Alcohol (1937)

and the Yale Center of Alcohol Studies (1943), and a national recovery advocacy effort led by the National Committee for Education on Alcoholism (1944). Two goals of this movement were to encourage local hospitals to detoxify alcoholics and to encourage local communities to establish post-hospitalization alcoholism rehabilitation centers (74). This movement spawned new institutional resources for the treatment of alcoholism from the mid-1940s through the 1960s, including “AA wards” in local hospitals, model outpatient alcoholism clinics developed in Connecticut and Georgia, and a model community-based residential model pioneered by three alcoholism programs in Minnesota: Pioneer House (1948), Hazelden (1949) and Willmar State Hospital (1950). Dr. Nelson Bradley, who led the developments at Willmar, later adapted the Minnesota Model for delivery within a community hospital. That adapted model was franchised throughout the United States in the 1980s via Parkside Medical Services and was replicated by innumerable hospital-based treatment programs.

The spread of these models nationally was aided by efforts to legitimize the work of physicians in the treatment of alcoholism. Early milestones in this movement included landmark resolutions on alcoholism passed by the American Medical Association (1952, 1956, 1967) and the American Hospital Association (1944, 1951, 1957) that paved the way for hospital-based treatment of alcoholism. The former were championed by Dr. Marvin Block, chairman of the AMA’s first Committee on Alcoholism. Mid-century alcoholism treatments included nutritional therapies, brief experiments with chemical and electro-convulsive therapies, psychosurgery and new drug therapies, including the use of disulfiram (Antabuse), stimulants, sedatives, tranquilizers and LSD (21).

A mid-twentieth century reform movement advocating medical rather than penal treatment of the opiate addict also helped spawn the rebirth of addiction medicine. This began with the founding of state-sponsored addiction treatment hospitals (e.g., Spadra Hospital in California) and led to the creation of two U.S. Public Health Hospitals within the Bureau of Prisons—one in Lexington, Kentucky (1935), the other in Fort Worth, Texas (1938). Many of the pioneers of modern addiction medicine and addiction research—Drs. Marie Nyswander, Jerry Jaffe, George Vaillant, Patrick Hughes and others—received their initial training at these facilities. The documentation of relapse rates following community re-entry from Lexington and Fort Worth confirmed the need for community-based treatment. Three replicable models of treatment emerged: ex-addict directed therapeutic communities, methadone maintenance pioneered by Drs. Vincent Dole and Marie Nyswander, and outpatient drug free counseling (21).

State and federal funding for alcoholism and addiction treatment slowly

increased from the late 1940s through the 1960s and was followed by landmark legislation in the early 1970s that created the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse (NIDA)—the beginning of the federal, state and local community partnership that has been the foundation of modern addiction treatment. Parallel efforts were underway to provide insurance coverage for the treatment of alcoholism and other drug dependencies. The expansion of such insurance coverage in the 1960s and 1970s and the establishment of accreditation standards for addiction treatment programs by the Joint Commission on Accreditation of Hospitals set the stage for the dramatic growth of hospital-based and free-standing, private addiction treatment programs in the 1980s. NIAAA and NIDA also made heavy investments in research that led to dramatic breakthroughs in understanding the neurobiology of addiction that encouraged more medicalized approaches to severe alcohol and other drug problems and an expanding menu of psychopharmacological adjuncts in the treatment of addiction (75).

The growing sophistication of addiction science was aided by other key organizations. The College of Problems of Drug Dependence (CPDD), which dates from the Committee on Problems of Drug Dependence established in 1929, hosts an annual scientific meeting and publishes the journal *Drug & Alcohol Dependence*. The Research Society on Alcoholism (RSA), founded in 1976, also holds an annual scientific conference and publishes the journal *Alcoholism: Clinical and Experimental Research*.

### **Addiction Medicine Comes of Age (1970-2008)**

The re-emergence of addiction medicine as a clinical specialty of medical practice has been significantly advanced by two professional associations: the American Society of Addiction Medicine (ASAM) and the American Academy of Addiction Psychiatry (AAAP).

The American Society of Addiction Medicine can trace its roots to the establishment of the creation of a New York City Medical Committee on Alcoholism in 1951 by the National Council on Alcoholism, the 1954 founding the New York State Medical Society on Alcoholism under the leadership of Dr. Ruth Fox, and the movement of this group in 1967 to establish itself as a national organization—the American Medical Society on Alcoholism (AMSA). AMSA was later evolved into the American Medical Society on Alcoholism and Other Drug Dependencies and then into the American Society of Addiction Medicine (ASAM). ASAM's achievements include:

- advocating the American Medical Association's addition of addiction medicine to its list of designated specialties (achieved in June 1990),
- offering a certification and recertification process for addiction medicine specialists based on the early work of the California Society of Addiction Medicine,
- hosting its annual addiction medicine conference,
- publishing its widely utilized patient placement criteria,
- development of the *Principles of Addiction Medicine*, and
- publishing first the *Journal of Addictive Diseases* and presently the *Journal of Addiction Medicine*.

ASAM has been very influential in establishing addiction medicine as a legitimate medical specialty. There are currently more than 4,000 ASAM certified physicians.

The American Academy of Addiction Psychiatry (formerly the American Academy of Psychiatrists in Alcoholism and the Addictions) was established in 1985 with the goal of elevating the quality of clinical practice in addiction psychiatry. The AAAP's contributions include successfully advocating that the American Board of Psychiatry and Neurology grant addiction medicine a subspecialty status (1991), administering an addiction psychiatry certification and recertification process, hosting an annual conference on addiction psychiatry, publishing the *American Journal on Addictions*, and promoting fellowships in addiction psychiatry (76).

Several additional initiatives have advanced addiction-related medical education. NIAAA and NIDA created the Career Teacher Program (1971-1981) that develop addiction-related curricula for the training of physicians in 59 U.S. medical schools. In 1976, Career Teachers and others involved in addiction-related medical education and research established the Association of Medical Education and Research in Substance Abuse (AMERSA). AMERSA draws its members primarily from American medical school faculty, hosts an annual meeting and publishes the journal *Substance Abuse*. In 1980, the Consortium for Medical Fellowships in Alcoholism and Drug Abuse was established to promote addiction-focused research and teaching specialists.

Today (2008), there are more than 14,400 physicians working within a network of 13,200 specialized addiction treatment programs in the United States who help care for the more than 1.9 million individuals and families admitted for treatment each year (77). As this history has reviewed, addiction medicine rose in the United States in the mid-nineteenth century, collapsed in the opening decades of the twentieth century, but re-emerged and became increasingly professionalized

in the late twentieth and early twenty-first centuries.

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