

The Irrationality of Alcoholics Anonymous

Its faith-based 12-step program dominates treatment in the United States. But researchers have debunked central tenets of AA doctrine and found dozens of other treatments more effective.



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J.G. IS A LAWYER in his early 30s. He's a fast talker and has the lean, sinewy build of a distance runner. His choice of profession seems preordained, as he speaks in fully formed paragraphs, his thoughts organized by topic sentences. He's also a worrier—a big one—who for years used alcohol to soothe his anxiety.

J.G. started drinking at 15, when he and a friend experimented in his parents' liquor cabinet. He favored gin and whiskey but drank whatever he thought his

parents would miss the least. He discovered beer, too, and loved the earthy, bitter taste on his tongue when he took his first cold sip.

His drinking increased through college and into law school. He could, and occasionally did, pull back, going cold turkey for weeks at a time. But nothing quieted his anxious mind like booze, and when he didn't drink, he didn't sleep. After four or six weeks dry, he'd be back at the liquor store.

By the time he was a practicing defense attorney, J.G. (who asked to be identified only by his initials) sometimes drank almost a liter of Jameson in a day. He often started drinking after his first morning court appearance, and he says he would have loved to drink even more, had his schedule allowed it. He defended clients who had been charged with driving while intoxicated, and he bought his own Breathalyzer to avoid landing in court on drunk-driving charges himself.

In the spring of 2012, J.G. decided to seek help. He lived in Minnesota—the Land of 10,000 Rehabs, people there like to say—and he knew what to do: check himself into a facility. He spent a month at a center where the treatment consisted of little more than attending Alcoholics Anonymous meetings. He tried to dedicate himself to the program even though, as an atheist, he was put off by the faith-based approach of the 12 steps, five of which mention God. Everyone there warned him that he had a chronic, progressive disease and that if he listened to the cunning internal whisper promising that he could have just one drink, he would be off on a bender.

J.G. says it was this message—that there were no small missteps, and one drink might as well be 100—that set him on a cycle of bingeing and abstinence. He went back to rehab once more and later sought help at an outpatient center. Each time he got sober, he'd spend months white-knuckling his days in court and his nights at home. Evening would fall and his heart would race as he thought ahead to another sleepless night. “So I'd have one drink,” he says, “and the first thing on my mind was: *I feel better now, but I'm screwed. I'm going right back to where I was. I might as well drink as much as I possibly can for the next three days.*”

He felt utterly defeated. And according to AA doctrine, the failure was his alone. When the 12 steps don't work for someone like J.G., Alcoholics Anonymous says that person must be deeply flawed. The Big Book, AA's bible, states:

Rarely have we seen a person fail who has thoroughly followed our path. Those who do not recover are people who cannot or will not completely give themselves to this simple program, usually men and women who are constitutionally incapable of being honest with themselves. There are such unfortunates. They are not at fault; they seem to have been born that way.

J.G.'s despair was only heightened by his seeming lack of options. "Every person I spoke with told me there was no other way," he says.

The 12 steps are so deeply ingrained in the United States that many people, including doctors and therapists, believe attending meetings, earning one's sobriety chips, and never taking another sip of alcohol is the only way to get better. Hospitals, outpatient clinics, and rehab centers use the 12 steps as the basis for treatment. But although few people seem to realize it, there are alternatives, including prescription drugs and therapies that aim to help patients learn to drink in moderation. Unlike Alcoholics Anonymous, these methods are based on modern science and have been proved, in randomized, controlled studies, to work.

For J.G., it took years of trying to "work the program," pulling himself back onto the wagon only to fall off again, before he finally realized that Alcoholics Anonymous was not his only, or even his best, hope for recovery. But in a sense, he was lucky: many others never make that discovery at all.

THE DEBATE OVER the efficacy of 12-step programs has been quietly bubbling for decades among addiction specialists. But it has taken on new urgency with the passage of the Affordable Care Act, which requires all insurers and state Medicaid programs to pay for alcohol- and substance-abuse treatment,

extending coverage to 32 million Americans who did not previously have it and providing a higher level of coverage for an additional 30 million.

Nowhere in the field of medicine is treatment less grounded in modern science. A 2012 report by the National Center on Addiction and Substance Abuse at Columbia University compared the current state of addiction medicine to general medicine in the early 1900s, when quacks worked alongside graduates of leading medical schools. The American Medical Association estimates that out of nearly 1 million doctors in the United States, only 582 identify themselves as addiction specialists. (The Columbia report notes that there may be additional doctors who have a subspecialty in addiction.) Most treatment providers carry the credential of addiction counselor or substance-abuse counselor, for which many states require little more than a high-school diploma or a GED. Many counselors are in recovery themselves. The report stated: “The vast majority of people in need of addiction treatment do not receive anything that approximates evidence-based care.”

Alcoholics Anonymous was established in 1935, when knowledge of the brain was in its infancy. It offers a single path to recovery: lifelong abstinence from alcohol. The program instructs members to surrender their ego, accept that they are “powerless” over booze, make amends to those they’ve wronged, and pray.

Alcoholics Anonymous is famously difficult to study. By necessity, it keeps no records of who attends meetings; members come and go and are, of course, anonymous. No conclusive data exist on how well it works. In 2006, the Cochrane Collaboration, a health-care research group, reviewed studies going back to the 1960s and found that “no experimental studies unequivocally demonstrated the effectiveness of AA or [12-step] approaches for reducing alcohol dependence or problems.”

The Big Book includes an assertion first made in the second edition, which was published in 1955: that AA has worked for 75 percent of people who have gone to meetings and “really tried.” It says that 50 percent got sober right away, and another 25 percent struggled for a while but eventually recovered. According to AA, these figures are based on members’ experiences.

In his recent book, *The Sober Truth: Debunking the Bad Science Behind 12-Step Programs and the Rehab Industry*, Lance Dodes, a retired psychiatry professor from Harvard Medical School, looked at Alcoholics Anonymous’s retention rates along with studies on sobriety and rates of active involvement (attending meetings regularly and working the program) among AA members. Based on these data, he put AA’s actual success rate somewhere between 5 and 8 percent. That is just a rough estimate, but it’s the most precise one I’ve been able to find.

I spent three years researching a book about women and alcohol, *Her Best-Kept Secret: Why Women Drink—And How They Can Regain Control*, which was published in 2013. During that time, I encountered disbelief from doctors and psychiatrists every time I mentioned that the Alcoholics Anonymous success rate appears to hover in the single digits. We’ve grown so accustomed to testimonials from those who say AA saved their life that we take the program’s efficacy as an article of faith.

Rarely do we hear from those for whom 12-step treatment doesn't work. But think about it: How many celebrities can you name who bounced in and out of rehab without ever getting better? Why do we assume they failed the program, rather than that the program failed them?

When my book came out, dozens of Alcoholics Anonymous members said that because I had challenged AA's claim of a 75 percent success rate, I would hurt or even kill people by discouraging attendance at meetings. A few insisted that I must be an "alcoholic in denial." But most of the people I heard from were desperate to tell me about their experiences in the American treatment industry. Amy Lee Coy, the author of the memoir *From Death Do I Part: How I Freed Myself From Addiction*, told me about her eight trips to rehab, starting at age 13. "It's like getting the same antibiotic for a resistant infection—eight times," she told me. "Does that make sense?"

"I honestly thought AA was the only way anyone could ever get sober, but I learned that I was wrong."

She and countless others had put their faith in a system they had been led to believe was effective—even though finding treatment centers' success rates is next to impossible: facilities rarely publish their data or even track their patients after discharging them. "Many will tell you that those who complete the program have a 'great success rate,' meaning that most are abstaining from drugs and alcohol while enrolled there," says Bankole Johnson, an alcohol researcher and the chair of the psychiatry department at the University of Maryland School of Medicine. "Well, no kidding."

Alcoholics Anonymous has more than 2 million members worldwide, and the structure and support it offers have helped many people. But it is not enough for everyone. The history of AA is the story of how one approach to treatment took root before other options existed, inscribing itself on the national consciousness and crowding out dozens of newer methods that have since been shown to work better.

A meticulous analysis of treatments, published more than a decade ago in *The Handbook of Alcoholism Treatment Approaches* but still considered one of the most comprehensive comparisons, ranks AA 38th out of 48 methods. At the top of the list are brief interventions by a medical professional; motivational enhancement, a form of counseling that aims to help people see the need to change; and acamprosate, a drug that eases cravings. (An oft-cited 1996 study found 12-step facilitation—a form of individual therapy that aims to get the patient to attend AA meetings—as effective as cognitive behavioral therapy and motivational interviewing. But that study, called Project Match, was widely criticized for scientific failings, including the lack of a control group.)

As an organization, Alcoholics Anonymous has no real central authority—each AA meeting functions more or less autonomously—and it declines to take positions on issues beyond the scope of the 12 steps. (When I asked to speak with someone from the General Service Office, AA’s administrative headquarters, regarding AA’s stance on other treatment methods, I received an e-mail stating: “Alcoholics Anonymous neither endorses nor opposes other approaches, and we cooperate widely with the medical profession.” The office also declined to comment on whether AA’s efficacy has been proved.) But many in AA and the rehab industry insist the 12 steps are the only answer and frown on using the prescription drugs that have been shown to help people reduce their drinking.

People with alcohol problems also suffer from higher-than-normal rates of mental-health issues, and research has shown that treating depression and anxiety with medication can reduce drinking. But AA is not equipped to address these issues—it is a support group whose leaders lack professional training—and some meetings are more accepting than others of the idea that members may need therapy and/or medication in addition to the group’s help.

AA truisms have so infiltrated our culture that many people believe heavy drinkers cannot recover before they “hit bottom.” Researchers I’ve talked with say that’s akin to offering antidepressants only to those who have attempted suicide, or prescribing insulin only after a patient has lapsed into a diabetic coma. “You might

as well tell a guy who weighs 250 pounds and has untreated hypertension and cholesterol of 300, ‘Don’t exercise, keep eating fast food, and we’ll give you a triple bypass when you have a heart attack,’” Mark Willenbring, a psychiatrist in St. Paul and a former director of treatment and recovery research at the National Institute on Alcohol Abuse and Alcoholism, told me. He threw up his hands. “Absurd.”

Part of the problem is our one-size-fits-all approach. Alcoholics Anonymous was originally intended for chronic, severe drinkers—those who may, indeed, be powerless over alcohol—but its program has since been applied much more broadly. Today, for instance, judges routinely require people to attend meetings after a DUI arrest; fully 12 percent of AA members are there by court order.

Whereas AA teaches that alcoholism is a progressive disease that follows an inevitable trajectory, data from a federally funded survey called the National Epidemiological Survey on Alcohol and Related Conditions show that nearly one-fifth of those who have had alcohol dependence go on to drink at low-risk levels with no symptoms of abuse. And a recent survey of nearly 140,000 adults by the Centers for Disease Control and Prevention found that nine out of 10 heavy drinkers are not dependent on alcohol and, with the help of a medical professional’s brief intervention, can change unhealthy habits.

We once thought about drinking problems in binary terms—you either had control or you didn’t; you were an alcoholic or you weren’t—but experts now describe a spectrum. An estimated 18 million Americans suffer from alcohol-use disorder, as the *DSM-5*, the latest edition of the American Psychiatric Association’s diagnostic manual, calls it. (The new term replaces the older *alcohol abuse* and the much more dated *alcoholism*, which has been out of favor with researchers for decades.) Only about 15 percent of those with alcohol-use disorder are at the severe end of the spectrum. The rest fall somewhere in the mild-to-moderate range, but they have been largely ignored by researchers and clinicians. Both groups—the hard-core abusers and the more moderate overdrinkers—need more-individualized treatment options.

“We cling to this one-size-fits-all theory even when a person has a small problem.”

The United States already spends about \$35 billion a year on alcohol- and substance-abuse treatment, yet heavy drinking causes 88,000 deaths a year—including deaths from car accidents and diseases linked to alcohol. It also costs the country hundreds of billions of dollars in expenses related to health care, criminal justice, motor-vehicle crashes, and lost workplace productivity, according to the CDC. With the Affordable Care Act’s expansion of coverage, it’s time to ask some important questions: Which treatments should we be willing to pay for? Have they been proved effective? And for whom—only those at the extreme end of the spectrum? Or also those in the vast, long-overlooked middle?

FOR A GLIMPSE of how treatment works elsewhere, I traveled to Finland, a country that shares with the United States a history of prohibition (inspired by the American temperance movement, the Finns outlawed alcohol from 1919 to 1932) and a culture of heavy drinking.

Finland’s treatment model is based in large part on the work of an American neuroscientist named John David Sinclair. I met with Sinclair in Helsinki in early July. He was battling late-stage prostate cancer, and his thick white hair was cropped short in preparation for chemotherapy. Sinclair has researched alcohol’s effects on the brain since his days as an undergraduate at the University of Cincinnati, where he experimented with rats that had been given alcohol for an extended period. Sinclair expected that after several weeks without booze, the rats would lose their desire for it. Instead, when he gave them alcohol again, they went on week-long benders, drinking far more than they ever had before—more, he says, than any rat had ever been shown to drink.

Sinclair called this the alcohol-deprivation effect, and his laboratory results, which have since been confirmed by many other studies, suggested a fundamental flaw in abstinence-based treatment: going cold turkey only intensifies cravings. This

discovery helped explain why relapses are common. Sinclair published his findings in a handful of journals and in the early 1970s moved to Finland, drawn by the chance to work in what he considered the best alcohol-research lab in the world, complete with special rats that had been bred to prefer alcohol to water. He spent the next decade researching alcohol and the brain.

Sinclair came to believe that people develop drinking problems through a chemical process: each time they drink, the endorphins released in the brain strengthen certain synapses. The stronger these synapses grow, the more likely the person is to think about, and eventually crave, alcohol—until almost anything can trigger a thirst for booze, and drinking becomes compulsive.

Sinclair theorized that if you could stop the endorphins from reaching their target, the brain's opiate receptors, you could gradually weaken the synapses, and the cravings would subside. To test this hypothesis, he administered opioid antagonists—drugs that block opiate receptors—to the specially bred alcohol-loving rats. He found that if the rats took the medication each time they were given alcohol, they gradually drank less and less. He published his findings in peer-reviewed journals beginning in the 1980s.

Subsequent studies found that an opioid antagonist called naltrexone was safe and effective for humans, and Sinclair began working with clinicians in Finland. He suggested prescribing naltrexone for patients to take an hour before drinking. As their cravings subsided, they could then learn to control their consumption. Numerous clinical trials have confirmed that the method is effective, and in 2001 Sinclair published a paper in the journal *Alcohol and Alcoholism* reporting a 78 percent success rate in helping patients reduce their drinking to about 10 drinks a week. Some stopped drinking entirely.

I visited one of three private treatment centers, called the Contral Clinics, that Sinclair co-founded in Finland. (There's an additional one in Spain.) In the past 18 years, more than 5,000 Finns have gone to the Contral Clinics for help with a drinking problem. Seventy-five percent of them have had success reducing their consumption to a safe level.

The Finns are famously private, so I had to go early in the morning, before any patients arrived, to meet Jukka Keski-Pukkila, the CEO. He poured coffee and showed me around the clinic, in downtown Helsinki. The most common course of treatment involves six months of cognitive behavioral therapy, a goal-oriented form of therapy, with a clinical psychologist. Treatment typically also includes a physical exam, blood work, and a prescription for naltrexone or nalmefene, a newer opioid antagonist approved in more than two dozen countries. When I asked how much all of this cost, Keski-Pukkila looked uneasy. “Well,” he told me, “it’s 2,000 euros.” That’s about \$2,500—a fraction of the cost of inpatient rehab in the United States, which routinely runs in the tens of thousands of dollars for a 28-day stay.

When I told Keski-Pukkila this, his eyes grew wide. “What are they doing for that money?” he asked. I listed some of the treatments offered at top-of-the-line rehab centers: equine therapy, art therapy, mindfulness mazes in the desert. “That doesn’t sound scientific,” he said, perplexed. I didn’t mention that some bare-bones facilities charge as much as \$40,000 a month and offer no treatment beyond AA sessions led by minimally qualified counselors.

AS I RESEARCHED THIS ARTICLE, I wondered what it would be like to try naltrexone, which the U.S. Food and Drug Administration approved for alcohol-abuse treatment in 1994. I asked my doctor whether he would write me a prescription. Not surprisingly, he shook his head no. I don’t have a drinking problem, and he said he couldn’t offer medication for an “experiment.” So that left the Internet, which was easy enough. I ordered some naltrexone online and received a foil-wrapped package of 10 pills about a week later. The cost was \$39.

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The first night, I took a pill at 6:30. An hour later, I sipped a glass of wine and felt almost nothing—no calming effect, none of the warm contentment that usually signals the end of my workday and the beginning of a relaxing evening. I finished the glass and poured a second. By the end of dinner, I looked up to see that I had barely touched it. I had never found wine so uninteresting. Was this a placebo effect? Possibly. But so it went. On the third night, at a restaurant where my husband and I split a bottle of wine, the waitress came to refill his glass twice; mine, not once. That had never happened before, except when I was pregnant. At the end of 10 days, I found I no longer looked forward to a glass of wine with dinner. (Interestingly, I also found myself feeling full much quicker than normal, and I lost two pounds. In Europe, an opioid antagonist is being tested on binge eaters.)

I was an *n* of one, of course. My experiment was driven by personal curiosity, not scientific inquiry. But it certainly felt as if I were unlearning something—the pleasure of that first glass? The desire for it? Both? I can't really say.

Patients on naltrexone have to be motivated to keep taking the pill. But Sari Castrén, a psychologist at the Contral Clinic I visited in Helsinki, told me that when patients come in for treatment, they're desperate to change the role alcohol has assumed in their lives. They've tried not drinking, and controlling their drinking, without success—their cravings are too strong. But with naltrexone or nalmefene, they're able to drink less, and the benefits soon become apparent: They sleep better. They have more energy and less guilt. They feel proud. They're able to read or watch movies or play with their children during the time they would have been drinking.

In therapy sessions, Castrén asks patients to weigh the pleasure of drinking against their enjoyment of these new activities, helping them to see the value of change. Still, the combination of naltrexone and therapy doesn't work for everyone. Some clients opt to take Antabuse, a medication that triggers nausea, dizziness, and other uncomfortable reactions when combined with drinking. And some patients are unable to learn how to drink without losing control. In those cases (about 10 percent of patients), Castrén recommends total abstinence from alcohol, but she leaves that choice to patients. "Sobriety is their decision, based on their own discovery," she told me.

Claudia Christian, an actress who lives in Los Angeles (she's best known for appearing in the 1990s science-fiction TV show *Babylon 5*), discovered naltrexone when she came across a flier for Vivitrol, an injectable form of the drug, at a detox center in California in 2009. She had tried Alcoholics Anonymous and traditional rehab without success. She researched the medication online, got a doctor to prescribe it, and began taking a dose about an hour before she planned to drink, as Sinclair recommends. She says the effect was like flipping a switch. For the first time in many years, she was able to have a single drink and then stop. She plans to keep taking naltrexone indefinitely, and has become an advocate for Sinclair's method: she set up a nonprofit organization for people seeking information about it and made a documentary called *One Little Pill*.

In the United States, doctors generally prescribe naltrexone for daily use and tell patients to avoid alcohol, instead of instructing them to take the drug anytime they plan to drink, as Sinclair would advise. There is disagreement among experts about which approach is better—Sinclair is adamant that American doctors are missing the drug's full potential—but both seem to work: naltrexone has been found to reduce drinking in more than a dozen clinical trials, including a large-scale one funded by the National Institute on Alcohol Abuse and Alcoholism that was published in *JAMA* in 2006. The results have been largely overlooked. Less than 1 percent of people treated for alcohol problems in the United States are prescribed naltrexone or any other drug shown to help control drinking.

To understand why, you have to first understand the history.

THE AMERICAN APPROACH to treatment for drinking problems has roots in the country's long-standing love-hate relationship with booze. The first settlers arrived with a great thirst for whiskey and hard cider, and in the early days of the republic, alcohol was one of the few beverages that was reliably safe from contamination. (It was also cheaper than coffee or tea.) The historian W. J. Rorabaugh has estimated that between the 1770s and 1830s, the average American over age 15 consumed at least five gallons of pure alcohol a year—the rough equivalent of three shots of hard liquor a day.

Religious fervor, aided by the introduction of public water-filtration systems, helped galvanize the temperance movement, which culminated in 1920 with Prohibition. That experiment ended after 14 years, but the drinking culture it fostered—secrecy and frenzied bingeing—persists.

In 1934, just after Prohibition's repeal, a failed stockbroker named Bill Wilson staggered into a Manhattan hospital. Wilson was known to drink two quarts of whiskey a day, a habit he'd attempted to kick many times. He was given the hallucinogen belladonna, an experimental treatment for addictions, and from his hospital bed he called out to God to loosen alcohol's grip. He reported seeing a flash of light and feeling a serenity he had never before experienced. He quit booze for good. The next year, he co-founded Alcoholics Anonymous. He based its principles

on the beliefs of the evangelical Oxford Group, which taught that people were sinners who, through confession and God's help, could right their paths.

AA filled a vacuum in the medical world, which at the time had few answers for heavy drinkers. In 1956, the American Medical Association named alcoholism a disease, but doctors continued to offer little beyond the standard treatment that had been around for decades: detoxification in state psychiatric wards or private sanatoriums. As Alcoholics Anonymous grew, hospitals began creating "alcoholism wards," where patients detoxed but were given no other medical treatment. Instead, AA members—who, as part of the 12 steps, pledge to help other alcoholics—appeared at bedsides and invited the newly sober to meetings.

Science can't yet fully explain why some heavy drinkers become physiologically dependent on alcohol and others don't, or why some recover while others founder.

A public-relations specialist and early AA member named Marty Mann worked to disseminate the group's main tenet: that alcoholics had an illness that rendered them powerless over booze. Their drinking was a disease, in other words, not a moral failing. Paradoxically, the prescription for this medical condition was a set of spiritual steps that required accepting a higher power, taking a "fearless moral inventory," admitting "the exact nature of our wrongs," and asking God to remove all character defects.

Mann helped ensure that these ideas made their way to Hollywood. In 1945's *The Lost Weekend*, a struggling novelist tries to loosen his writer's block with booze, to devastating effect. In *Days of Wine and Roses*, released in 1962, Jack Lemmon slides into alcoholism along with his wife, played by Lee Remick. He finds help through AA, but she rejects the group and loses her family.

Mann also collaborated with a physiologist named E. M. Jellinek. Mann was eager to bolster the scientific claims behind AA, and Jellinek wanted to make a name for himself in the growing field of alcohol research. In 1946, Jellinek published the

results of a survey mailed to 1,600 AA members. Only 158 were returned. Jellinek and Mann jettisoned 45 that had been improperly completed and another 15 filled out by women, whose responses were so unlike the men's that they risked complicating the results. From this small sample—98 men—Jellinek drew sweeping conclusions about the “phases of alcoholism,” which included an unavoidable succession of binges that led to blackouts, “indefinable fears,” and hitting bottom. Though the paper was filled with caveats about its lack of scientific rigor, it became AA gospel.

Jellinek, however, later tried to distance himself from this work, and from Alcoholics Anonymous. His ideas came to be illustrated by a chart showing how alcoholics progressed from occasionally drinking for relief, to sneaking drinks, to guilt, and so on until they hit bottom (“complete defeat admitted”) and then recovered. If you could locate yourself even early in the downward trajectory on that curve, you could see where your drinking was headed. In 1952, Jellinek noted that the word *alcoholic* had been adopted to describe anyone who drank excessively. He warned that overuse of that word would undermine the disease concept. He later beseeched AA to stay out of the way of scientists trying to do objective research.

But AA supporters worked to make sure their approach remained central. Marty Mann joined prominent Americans including Susan Anthony, the grandniece of Susan B. Anthony; Jan Clayton, the mom from *Lassie*; and decorated military officers in testifying before Congress. John D. Rockefeller Jr., a lifelong teetotaler, was an early booster of the group.

In 1970, Senator Harold Hughes of Iowa, a member of AA, persuaded Congress to pass the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act. It called for the establishment of the National Institute on Alcohol Abuse and Alcoholism, and dedicated funding for the study and treatment of alcoholism. The NIAAA, in turn, funded Marty Mann's nonprofit advocacy group, the National Council on Alcoholism, to educate the public. The nonprofit

became a mouthpiece for AA's beliefs, especially the importance of abstinence, and has at times worked to quash research that challenges those beliefs.

In 1976, for instance, the Rand Corporation released a study of more than 2,000 men who had been patients at 44 different NIAAA-funded treatment centers. The report noted that 18 months after treatment, 22 percent of the men were drinking moderately. The authors concluded that it was possible for some alcohol-dependent men to return to controlled drinking. Researchers at the National Council on Alcoholism charged that the news would lead alcoholics to falsely believe they could drink safely. The NIAAA, which had funded the research, repudiated it. Rand repeated the study, this time looking over a four-year period. The results were similar.

After the Hughes Act was passed, insurers began to recognize alcoholism as a disease and pay for treatment. For-profit rehab facilities sprouted across the country, the beginnings of what would become a multibillion-dollar industry. (Hughes became a treatment entrepreneur himself, after retiring from the Senate.) If Betty Ford and Elizabeth Taylor could declare that they were alcoholics and seek help, so too could ordinary people who struggled with drinking. Today there are more than 13,000 rehab facilities in the United States, and 70 to 80 percent of them hew to the 12 steps, according to Anne M. Fletcher, the author of *Inside Rehab*, a 2013 book investigating the treatment industry.

THE PROBLEM IS that nothing about the 12-step approach draws on modern science: not the character building, not the tough love, not even the standard 28-day rehab stay.

Marvin D. Seppala, the chief medical officer at the Hazelden Betty Ford Foundation in Minnesota, one of the oldest inpatient rehab facilities in the country, described for me how 28 days became the norm: "In 1949, the founders found that it took about a week to get detoxed, another week to come around so [the patients] knew what they were up to, and after a couple of weeks they were doing well, and stable. That's how it turned out to be 28 days. There's no magic in it."

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Tom McLellan, a psychology professor at the University of Pennsylvania School of Medicine who has served as a deputy U.S. drug czar and is an adviser to the World Health Organization, says that while AA and other programs that focus on behavioral change have value, they don't address what we now know about the biology of drinking.

Alcohol acts on many parts of the brain, making it in some ways more complex than drugs like cocaine and heroin, which target just one area of the brain. Among other effects, alcohol increases the amount of GABA (gamma-aminobutyric acid), a chemical that slows down activity in the nervous system, and decreases the flow of glutamate, which activates the nervous system. (This is why drinking can make you relax, shed inhibitions, and forget your worries.) Alcohol also prompts the brain to release dopamine, a chemical associated with pleasure.

Over time, though, the brain of a heavy drinker adjusts to the steady flow of alcohol by producing less GABA and more glutamate, resulting in anxiety and irritability. Dopamine production also slows, and the person gets less pleasure out of everyday

things. Combined, these changes gradually bring about a crucial shift: instead of drinking to feel good, the person ends up drinking to avoid feeling bad. Alcohol also damages the prefrontal cortex, which is responsible for judging risks and regulating behavior—one reason some people keep drinking even as they realize that the habit is destroying their lives. The good news is that the damage can be undone if they're able to get their consumption under control.

Studies of twins and adopted children suggest that about half of a person's vulnerability to alcohol-use disorder is hereditary, and that anxiety, depression, and environment—all considered “outside issues” by many in Alcoholics Anonymous and the rehab industry—also play a role. Still, science can't yet fully explain why some heavy drinkers become physiologically dependent on alcohol and others don't, or why some recover while others founder. We don't know how much drinking it takes to cause major changes in the brain, or whether the brains of alcohol-dependent people are in some ways different from “normal” brains to begin with. What we do know, McLellan says, is that “the brains of the alcohol-addicted aren't like those of the non-alcohol-dependent.”

Bill Wilson, AA's founding father, was right when he insisted, 80 years ago, that alcohol dependence is an illness, not a moral failing. Why, then, do we so rarely treat it medically? It's a question I've heard many times from researchers and clinicians. “Alcohol- and substance-use disorders are the realm of medicine,” McLellan says. “This is not the realm of priests.”

WHEN THE HAZELDEN TREATMENT CENTER opened in 1949, it espoused five goals for its patients: behave responsibly, attend lectures on the 12 steps, make your bed, stay sober, and talk with other patients. Even today, Hazelden's Web site states:

People addicted to alcohol can be secretive, self-centered, and filled with resentment. In response, Hazelden's founders insisted that patients attend to the details of daily life, tell their stories, and listen to each other

... This led to a heartening discovery, one that's become a cornerstone of the Minnesota Model: Alcoholics and addicts can help each other.

That may be heartening, but it's not science. As the rehab industry began expanding in the 1970s, its profit motives dovetailed nicely with AA's view that counseling could be delivered by people who had themselves struggled with addiction, rather than by highly trained (and highly paid) doctors and mental-health professionals. No other area of medicine or counseling makes such allowances.

There is no mandatory national certification exam for addiction counselors. The 2012 Columbia University report on addiction medicine found that only six states required alcohol- and substance-abuse counselors to have at least a bachelor's degree and that only one state, Vermont, required a master's degree. Fourteen states had no license requirements whatsoever—not even a GED or an introductory training course was necessary—and yet counselors are often called on by the judicial system and medical boards to give expert opinions on their clients' prospects for recovery.

Fourteen states had no license requirements for addiction counselors—not even a GED or an introductory course.

Mark Willenbring, the St. Paul psychiatrist, winced when I mentioned this. “What’s wrong,” he asked me rhetorically, “with people with no qualifications or talents—other than being recovering alcoholics—being licensed as professionals with decision-making authority over whether you are imprisoned or lose your medical license?”

“The history—and current state—is really, really dismal,” Willenbring said.

Perhaps even worse is the pace of research on drugs to treat alcohol-use disorder. The FDA has approved just three: Antabuse, the drug that induces nausea and dizziness when taken with alcohol; acamprosate, which has been shown to be

helpful in quelling cravings; and naltrexone. (There is also Vivitrol, the injectable form of naltrexone.)

Reid K. Hester, a psychologist and the director of research at Behavior Therapy Associates, an organization of psychologists in Albuquerque, says there has long been resistance in the United States to the idea that alcohol-use disorder can be treated with drugs. For a brief period, DuPont, which held the patent for naltrexone when the FDA approved it for alcohol-abuse treatment in 1994, paid Hester to speak about the drug at medical conferences. “The reaction was always ‘How can you be giving alcoholics drugs?’” he recalls.

Hester says this attitude dates to the 1950s and ’60s, when psychiatrists regularly prescribed heavy drinkers Valium and other sedatives with great potential for abuse. Many patients wound up dependent on both booze and benzodiazepines. “They’d look at me like I was promoting *Valley of the Dolls 2.0*,” Hester says.

There has been some progress: the Hazelden center began prescribing naltrexone and acamprosate to patients in 2003. But this makes Hazelden a pioneer among rehab centers. “Everyone has a bias,” Marvin Seppala, the chief medical officer, told me. “I honestly thought AA was the only way anyone could ever get sober, but I learned that I was wrong.”

Stephanie O’Malley, a clinical researcher in psychiatry at Yale who has studied the use of naltrexone and other drugs for alcohol-use disorder for more than two decades, says naltrexone’s limited use is “baffling.”

“There was never any campaign for this medication that said, ‘Ask your doctor,’” she says. “There was never any attempt to reach consumers.” Few doctors accepted that it was possible to treat alcohol-use disorder with a pill. And now that naltrexone is available in an inexpensive generic form, pharmaceutical companies have little incentive to promote it.

In one recent study, O’Malley found naltrexone to be effective in limiting consumption among college-age drinkers. The drug helped subjects keep from going over the legal threshold for intoxication, a blood alcohol content of 0.08

percent. Naltrexone is not a silver bullet, though. We don't yet know for whom it works best. Other drugs could help fill in the gaps. O'Malley and other researchers have found, for example, that the smoking-cessation medication varenicline has shown promise in reducing drinking. So, too, have topirimate, a seizure medication, and baclofen, a muscle relaxant. "Some of these drugs should be considered in primary-care offices," O'Malley says. "And they're just not."

IN LATE AUGUST, I visited Alltyr, a clinic that Willenbring founded in St. Paul. It was here that J.G. finally found help.

After his stays in rehab, J.G. kept searching for alternatives to 12-step programs. He read about baclofen and how it might ease both anxiety and cravings for alcohol, but his doctor wouldn't prescribe it. In his desperation, J.G. turned to a Chicago psychiatrist who wrote him a prescription for baclofen without ever meeting him in person and eventually had his license suspended. Then, in late 2013, J.G.'s wife came across Alltyr's Web site and discovered, 20 minutes from his law office, a nationally known expert in treating alcohol- and substance-use disorders.

J.G. now sees Willenbring once every 12 weeks. During those sessions, Willenbring checks on J.G.'s sleep patterns and refills his prescription for baclofen (Willenbring was familiar with the studies on baclofen and alcohol, and agreed it was a viable treatment option), and occasionally prescribes Valium for his anxiety. J.G. doesn't drink at all these days, though he doesn't rule out the possibility of having a beer every now and then in the future.

The whole idea made Jean uncomfortable. How did people get better by recounting the worst moments of their lives to strangers? Still, she went.

I also talked with another Alltyr patient, Jean, a Minnesota floral designer in her late 50s who at the time was seeing Willenbring three or four times a month but has since cut back to once every few months. "I actually look forward to going," she told

me. At age 50, Jean (who asked to be identified by her middle name) went through a difficult move and a career change, and she began soothing her regrets with a bottle of red wine a day. When Jean confessed her habit to her doctor last year, she was referred to an addiction counselor. At the end of the first session, the counselor gave Jean a diagnosis: “You’re a drunk,” he told her, and suggested she attend AA.

The whole idea made Jean uncomfortable. How did people get better by recounting the worst moments of their lives to strangers? Still, she went. Each member’s story seemed worse than the last: One man had crashed his car into a telephone pole. Another described his abusive blackouts. One woman carried the guilt of having a child with fetal alcohol syndrome. “Everybody talked about their ‘alcoholic brain’ and how their ‘disease’ made them act,” Jean told me. She couldn’t relate. She didn’t believe her affection for pinot noir was a disease, and she bristled at the lines people read from the Big Book: “We thought we could find a softer, easier way,” they recited. “But we could not.”

Surely, Jean thought, modern medicine had to offer a more current form of help.

Then she found Willenbring. During her sessions with him, she talks about troubling memories that she believes helped ratchet up her drinking. She has occasionally had a drink; Willenbring calls this “research,” not “a relapse.” “There’s no belittling, no labels, no judgment, no book to carry around, no taking away your ‘medal,’” Jean says, a reference to the chips that AA members earn when they reach certain sobriety milestones.

In his treatment, Willenbring uses a mix of behavioral approaches and medication. Moderate drinking is not a possibility for every patient, and he weighs many factors when deciding whether to recommend lifelong abstinence. He is unlikely to consider moderation as a goal for patients with severe alcohol-use disorder. (According to the *DSM-5*, patients in the severe range have six or more symptoms of the disorder, such as frequently drinking more than intended, increased tolerance, unsuccessful attempts to cut back, cravings, missing obligations due to drinking, and continuing to drink despite negative personal or social consequences.) Nor is he apt to suggest moderation for patients who have mood,

anxiety, or personality disorders; chronic pain; or a lack of social support. “We can provide treatment based on the stage where patients are,” Willenbring said. It’s a radical departure from issuing the same prescription to everyone.

The difficulty of determining which patients are good candidates for moderation is an important cautionary note. But promoting abstinence as the only valid goal of treatment likely deters people with mild or moderate alcohol-use disorder from seeking help. The prospect of never taking another sip is daunting, to say the least. It comes with social costs and may even be worse for one’s health than moderate drinking: research has found that having a drink or two a day could reduce the risk of heart disease, dementia, and diabetes.

To many, though, the idea of non-abstinent recovery is anathema.

NO ONE KNOWS THAT better than Mark and Linda Sobell, who are both psychologists. In the 1970s, the couple conducted a study with a group of 20 patients in Southern California who had been diagnosed with alcohol dependence. Over the course of 17 sessions, they taught the patients how to identify their triggers, how to refuse drinks, and other strategies to help them drink safely. In a follow-up study two years later, the patients had fewer days of heavy drinking, and more days of no drinking, than did a group of 20 alcohol-dependent patients who were told to abstain from drinking entirely. (Both groups were given a standard hospital treatment, which included group therapy, AA meetings, and medications.) The Sobells published their findings in peer-reviewed journals.

In 1980, the University of Toronto recruited the couple to conduct research at its prestigious Addiction Research Foundation. “We didn’t set out to challenge tradition,” Mark Sobell told me. “We just set out to do good research.” Not everyone saw it that way. In 1982, abstinence-only proponents attacked the Sobells in the journal *Science*; one of the writers, a UCLA psychologist named Irving Maltzman, later accused them of faking their results. The *Science* article received widespread attention, including a story in *The New York Times* and a segment on *60 Minutes*.

Over the next several years, four panels of investigators in the United States and Canada cleared the couple of the accusations. Their studies were accurate. But the exonerations had scant impact, Mark Sobell said: “Maybe a paragraph on page 14” of the newspaper.

America spends \$35 billion a year on substance-abuse treatments, yet heavy drinking causes 88,000 deaths a year.

The late G. Alan Marlatt, a respected addiction researcher at the University of Washington, commented on the controversy in a 1983 article in *American Psychologist*. “Despite the fact that the basic tenets of [AA’s] disease model have yet to be verified scientifically,” Marlatt wrote, “advocates of the disease model continue to insist that alcoholism is a unitary disorder, a progressive disease that can only be arrested temporarily by total abstinence.”

What’s stunning, 32 years later, is how little has changed.

The Sobells returned to the United States in the mid-1990s to teach and conduct research at Nova Southeastern University, in Fort Lauderdale, Florida. They also run a clinic. Like Willenbring in Minnesota, they are among a small number of researchers and clinicians, mostly in large cities, who help some patients learn to drink in moderation.

“We cling to this one-size-fits-all theory even when a person has a small problem,” Mark Sobell told me. “The idea is ‘Well, this may be the person you are now, but this is where this is going, and there’s only one way to fix it.’” Sobell paused. “But we have 50 years of research saying that, chances are, that’s not the way it’s going. We can change the course.”

DURING MY VISIT TO FINLAND, I interviewed P., a former Contral Clinic patient who asked me to use only his last initial in order to protect his privacy. He told me that for years he had drunk to excess, sometimes

having as many as 20 drinks at a time. A 38-year-old doctor and university researcher, he describes himself as mild-mannered while sober. When drunk, though, “it was as if some primitive human took over.”

His wife found a Contral Clinic online, and P. agreed to go. From his first dose of naltrexone, he felt different—in control of his consumption for the first time. P. plans to use naltrexone for the rest of his life. He drinks two, maybe three, times a month. By American standards, these episodes count as binges, since he sometimes downs more than five drinks in one sitting. But that’s a steep decline from the 80 drinks a month he consumed before he began the treatment—and in Finnish eyes, it’s a success.

Sari Castrén, the psychologist I met at Contral, says such trajectories are the rule among her patients. “Helping them find this path is so rewarding,” she says. “This is a softer way to look at addiction. It doesn’t have to be so black and white.”

J.G. agrees. He feels much more confident and stable, he says, than he did when he was drinking. He has successfully drunk in moderation on occasion, without any loss of control or desire to consume more the next day. But for the time being, he’s content not drinking. “It feels like a big risk,” he says. And he has more at stake now—his daughter was born in June 2013, about six months before he found Willenbring.

Could the Affordable Care Act’s expansion of coverage prompt us to rethink how we treat alcohol-use disorder? That remains to be seen. The Department of Health and Human Services, the primary administrator of the act, is currently evaluating treatments. But the legislation does not specify a process for deciding which methods should be approved, so states and insurance companies are setting their own rules. How they’ll make those decisions is a matter of ongoing discussion.

Still, many leaders in the field are hopeful—including Tom McLellan, the University of Pennsylvania psychologist. His optimism is particularly poignant: in 2008, he lost a son to a drug overdose. “If I didn’t know what to do for my kid, when I know this stuff and am surrounded by experts, how the hell is a schoolteacher or a