Testimony to the Judiciary Committee

Senator Charles Grassley

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Jay Hansen is currently the Executive Director of Prairie Ridge Integrated Behavioral Healthcare in Mason City, Iowa. He began with the organization in 1974 after graduating from the University of Northern Iowa with a degree in Social Work. Mr. Hansen was appointed the Executive Director in 1980 and has served in that role to the present. He has held various clinical and administrative roles over the years and has had an interest in quality improvement efforts on a state-wide and national level. In 2006, Mr. Hansen was the Executive Sponsor for Prairie Ridge in a national effort to improve substance use disorder care through the Robert Wood Johnson Foundation and the University of Wisconsin. He has served as Past President of the Iowa Behavioral Health Association and has recently been reappointed by Governor Branstad to his third term on the State Board of Health. He also chairs the Substance Abuse and Problem Gambling Committee for the Board. Jay also has served on numerous task forces and commission and has provided numerous trainings and presentations related to substance use disorders on a local, state and national level. He was published in the National Institute on Drug Abuse journal, Science, Practice and Perspective in April of 2007, discussing strategies for treating methamphetamine abuse.

Over the past 15 years we have gained a much clearer understanding of addiction and the relationship to the brain. Dr. Nora Volkow, at the National Institute of Drug Abuse and others have shown through brain scans and research, how drugs act on the neurotransmitters in the pleasure center of the brain.

The reward, or pleasure center of the brain have, been responsible for our survival over the years. It rewards us when we eat/drink, procreate, and when we affiliate with others. Those rewards have encouraged human kind to do the things that help us survive and grow. Unfortunately, those addicted to drugs have added another layer to those basic reward pathways-addiction.

The reason we have drug problems in our society are due to the fact that drugs work so well-at least for the short term. The better they make us feel, the more susceptible we are for repeated use. Meth is likely the granddaddy of reward resulting in a massive release of dopamine in the brain resulting in euphoric state unlike anything they have ever experience before. For example, in lab experiments done on animals, sex causes dopamine to levels to jump from 100 to 200 units, and cocaine causes them to spike to 350 units. With methamphetamine you get a release from the base level to 1,250 units, something that is about 12 times greater than pleasurable activities such as eating.

Those with meth addictions report that the first time they use meth, it was an incredibly positive and rewarding experience. They will continue to chase the first time high into the future- never finding it again. The human body will attempt to maintain homeostasis from the time of first use. With massive amounts of dopamine released into the reward pathway, the brains says whoa, this is too much of a good thing. The brain will begin to reduce the absorption and production of dopamine as a way to protect itself leaving the user without normal levels of dopamine which leads to eventual craving and drug seeking. Over time, the user seeks meth to feel normal not high. This begins the cycle of addiction that is very hard to break.

Addiction is difficult to understand. It seems so obvious that those addicted should see the problems that their use is causing and make the decision to quit before serious problems occur. Two of the best definitions of addiction that I have found are: continued use in spite of negative consequences, and, an irresistible urge to perform an irrational act. Both highlight the fight between the addicted brain and logical decision making based upon reason and judgement. Imagine being 200 feet below the water's surface, running out of air. You know that breathing will cause you to drown-yet you breathe because you brain is saying you need this to live. You know it is irrational to do so, yet the urge to do so is irresistible. When the areas of the pleasure center are not satiated, great desire or craving is created to satiate them. And that is the battle of addiction, a brain screaming for drugs. Drugs that you know will harm you, and you breathe in spite of that knowledge.

That is what substance use disorder treatment is about, helping persons understand the brain disease and bolstering the part of the brain that can mediate the urges and cravings. Treatment of methamphetamine starts by assessing the physical and emotional

consequences of the addiction. The early phase of treatment is very important attempting engage the person and create a sense of hope. Providing sleep, good nutrition and supports are all crucial at this stage. As individuals begin to stabilize, cognitive behavioral skill building and relapse prevention can begin along with urine screens for accountability. Family support is very important to provide both accountability and support for change. Attention to the environment they will return to and the changes that need to happen to avoid triggers and urges in their daily life. They will return to a life that will be a war between the pleasure center of the brain and their new logical brain that can fend off cravings and urges. To return to the breathing analogy, treatment can provide them with planning and skills so that when they are 200 feet below water, they will have put in place skills and thinking that will save their life.

There have been various accounts that methamphetamine treatment is not successful. In Iowa, independent outcomes have supported methamphetamine treatment to be as successful as other drugs of abuse. More than half of those seeking treatment in Iowa report very positive outcomes including abstinence, fewer hospitalizations, increased employment and income and greatly reduced legal problems as reported by the University of Iowa Research Consortium.

Methamphetamine is a powerful, highly addictive stimulant that effects the central nervous system. Also known as meth, chalk, ice, and crystal, among other terms, it takes the form of a white, odorless, bitter tasting crystalline powder that easily dissolves in water or alcohol.

Methamphetamine was developed early in the 20th century from its parent drug, amphetamine, and was used originally in nasal decongestants and bronchial inhalers. Like amphetamine, methamphetamine causes increased activity and talkativeness, decreased appetite, and a pleasurable sense of well-being or euphoria. However, methamphetamine differs from amphetamine in that, in comparable doses, much greater amounts make its way into the brain, making it a more potent stimulant. It also has a longer lasting and more harmful effects on the central nervous system.

Methamphetamine has been classified by the U.S. Drug Enforcement Administration as a schedule II stimulant, which makes it legally available only through a non-refillable prescription. Medically it may be indicated for the treatment of Attention Deficit Hyper-Activity Disorder (ADHD) and as a short term component of weight loss treatment.

According to a 2012 National Survey on Drug Use and Health (NSDUH), approximately 1.2 million people (0.4% of the population) reported using methamphetamine in the past year, and 440,000 (0.2%) reported using it the past month. This represents a decrease from previous years; in 2006 731,000 (0.3%) reported past month use. In 2012, there were 133,000 new users of methamphetamine age 12 or older – the same as the previous year but continuing a general down-ward trend across the past decade. The average age of new methamphetamine users in 2012 was 19.7 years old.

The 2012 Monitoring the Future (MFT) survey of adolescent drug use and attitudes reported that about 1% of 8th, 10th, and 12th graders had used methamphetamine within the past year. This data indicates that 10th and 12th graders are using methamphetamine less than they did five years ago, but that use by 8th graders has not dropped significantly in that time.

According to the Drug Abuse Warning Network (DAWN), which collects information on drug related episodes from hospital emergency departments throughout the nation, methamphetamine accounted for 103,000 emergency department visits in 2011; it was the fourth most mentioned illicit drugs in emergency department visits following cocaine, marijuana, and heroine. While still high, the number represents a decrease from the 132,576 emergency department visits for methamphetamine abuse measured in 2004.

The Treatment Episode Data Set (TEDS) provides information on admissions to substance use disorder treatment facilities that are licensed or certified by state substance use disorder agencies. According to the TEDS data, nationwide treatment for admissions for methamphetamine abuse dropped from 8.1% in 2005 to 5.6% in 2011. The majority of primary methamphetamine admissions were male (53%), and two-thirds (68%) were non-Hispanic whites.

Prairie Ridge Integrated Behavioral Healthcare in North Central Iowa substance use disorder treatment facility reported the following admissions from year 2007-2015:

YEAR	% of Methamphetamine Admits
2007	19%
2008	15%
2009	17%
2010	18%
2011	14%
2012	17%
2013	21%
2014	23%

While national trends are showing declines, methamphetamine abuse continues to exhibit regional variability. The strongest affects are felt in the west and parts of the mid-west, according to the National Institute on Drug Abuses (NIDA) and Community Epidemiology Work Patterns of Drug Abuse across the United States.

Methamphetamine comes in several forms and can be smoked, inhaled (snorted), injected, anally, or orally ingested. The preferred method of abusing the drug varies by geographical region and has changed over time. Smoking methamphetamine is currently the most common way of ingesting it.

Smoking or injecting methamphetamine puts the drug very quickly into the blood stream and brain, causing an immediate, intense "rush" and amplifying the drug's addiction potential and adverse health consequences. The rush or "flash" lasts only a few minutes and is described as extremely pleasurable. Snorting or oral ingestion produces euphoria/a high, but not an intense rush. Snorting produces effects within three to five minutes and oral ingestion produces effects within 15 to 20 minutes.

As with many stimulants, methamphetamine is most often abused in a "binge and crash" pattern. Because the pleasurable effects of methamphetamine disappear even before the drug concentration in the blood falls significantly, users try to maintain a high by taking more of the drug.

Most of the methamphetamine used in this country is manufactured in "super labs" here or in Mexico. The drug is also easily made in small clandestine laboratories, with relatively inexpensive over the counter ingredients such as pseudoephedrine, a common ingredient in cold medications. The curb production of methamphetamine, Congress passed the Combat Methamphetamine Epidemic Act in 2005, which requires that pharmacies and other retail stores keeps logs of purchases of products containing pseudoephedrine and limits made pseudoephedrine available only with a prescription. Mexico has also tightened its restrictions on this and other methamphetamine precursory chemicals.

Manufactures have adapted to these restrictions via small-or large-scale smurfing operations: obtaining pseudoephedrine from multiple sources, below the legal thresholds, using multiple false identifications. Manufacturers in Mexico are also increasingly using a different production process (called P2P, from the precursor chemical phenyl-2-propanone) that does not require pseudoephedrine.

Methamphetamine production also involves a number of other easily obtained chemicals that are hazardous such as acetone, anhydrous ammonia (fertilizer), ether, red phosphorus, and lithium. Toxicity from these chemicals can remain in the environment around a methamphetamine production lab long after the lab has been shut down, causing a wide range of damaging effects to health.

The methamphetamine molecule is structurally similar to amphetamine and the neurotransmitter dopamine, a brain chemical that plays an important role in the regulation of reward, but it is quite different from cocaine. Although these stimulants have similar behavioral and physiological effects, there are some major differences in the basic mechanisms of how they work.

In contrast to cocaine, which is quickly removed from and almost completely metabolized in the body, methamphetamine has a much longer duration of action, and a larger percentage of the drug remains unchanged in the body. Methamphetamine, therefore, remains in the brain longer, which ultimately leads to prolonged stimulant effects. Although both methamphetamine and cocaine increase levels of dopamine, administration of methamphetamine in animal studies leads to much higher levels of dopamine, because nerve cells respond differently to the two drugs. Cocaine prolongs dopamine actions in the brain by blocking the reabsorption (re-uptake) of the neuro transmitter by signaling nerve cells. At low doses, methamphetamine also blocks the reuptake of dopamine, but it also increases the release of dopamine – leading to much higher concentrations in the synapse (the gap between the neurons), which can be toxic to the nerve terminals.

As a powerful stimulant, methamphetamine, even in small doses, can increase wakefulness and physical activity and decreases appetite. Methamphetamine can also cause a variety of cardiovascular problems, including rapid heart rate, irregular heartbeat, and increased blood pressure. Hypothermia (elevated body temperature) and convulsions may occur with methamphetamine over-dose, and if not treated immediately can result in death.

Most of the pleasurable effects of methamphetamine are believed to be the result of release of very high levels of the neuro transmitter dopamine. Dopamine is involved in motivation and the experience of pleasure and motor function. It is also a common mechanism of action for most drugs of abuse. This elevated release of dopamine produced by methamphetamine is also thought to contribute to the drugs' deleterious effects on the nerve terminals in the brain. Short term effects may include increased

attention and decreased fatigue, increased activity and wakefulness, decreased appetite, euphoria and rush, increased respiration, rapid/irregular heartbeat, and hyperthermia.

Long term methamphetamine abuses has many negative consequences, including addiction. Addiction is a chronic, relapsing disease, characterized by compulsive drug seeking and use and accompanied by functional and molecular changes in the brain.

As in the case with many drugs, tolerance to methamphetamine's pleasurable effects develops when it is taken repeatedly. Abusers often need to take higher doses of the drug, taking it more frequently, or change how they take it in an effort to get the desired effect. Chronic methamphetamine abusers may develop difficulty feeling any pleasure other than that provided by the drug, fueling further abuse. Withdrawal from methamphetamine occurs when a chronic abuser stops taking the drug; symptoms of withdrawal include depression, anxiety, fatigue, and an intense craving for the drug.

In addition to being addicted to methamphetamine, chronic abusers may exhibit symptoms that can include significant anxiety, confusion, insomnia, mood disturbances, and violent behavior. They also may display a number of psychotic features including paranoia, visual and auditory hallucinations and delusions. Psychotic symptoms can sometimes last for months or years after a person has quit abusing methamphetamine and stress has been showed to precipitate spontaneous reoccurrence of methamphetamine psychosis and formally psychotic methamphetamine abusers.

These and other problems conduct significant changes in the brain caused by abuse of methamphetamine: neuroimaging studies have demonstrated alterations in the activity of the dopamine system that are associated with reduced motor speed and impaired verbal learning. Studies in the chronic methamphetamine abusers have also revealed several structural and function changes in the areas of the brain associated with emotion and memory, which may account for many of the emotional and cognitive problems observed in chronic methamphetamine abusers.

Methamphetamine abuse has also been shown to have negative effects on non-neural brain cells called microglia. These cells support brain health by defending the brain against infectious agents and removing damaged neurons. Too much activity of the microglia cells, however, can assault healthy neurons. A study using brain imaging found more than double the levels of microglia cells in former methamphetamine abusers compared to people with no history of methamphetamine abuse – which could explain some of the neuro toxic effects of methamphetamine.

Some of the neural biological effects of chronic methamphetamine abuse appear to be at least partial reversible. In the aforementioned study, abstinence from methamphetamine resulted in less excess microglial activation over time, and abusers who had remained methamphetamine free for two years exhibited microglial activation levels similar to the study's control subjects.

In addition to the neurological and behavioral consequences of methamphetamine abuse, long term users also suffer physical effects including weight loss, severe tooth decay and tooth loss, and skin sores.

The most effective treatments for methamphetamine addiction are behavioral therapies, such as cognitive-behavioral and contingency-management interventions. For example, the Matrix Model, a 16 week comprehensive behavioral treatment approach that combines behavioral therapy, family education, individual counseling, twelve step support, drug testing, and encouragement from non-drug related activities has been shown to be effective in reducing methamphetamine abuse.

Although medications have proven effective in treating some substance use disorders, there are currently no medications that counteract the specific effects of methamphetamine or that prolong abstinence from and reduce the abuse of methamphetamine by individuals addicted to the drug.

One Program's Transition to Research-Based Strategies for Treating Methamphetamine Abuse

Prairie Ridge Addiction Treatment Services turned to SAMHSA's Treatment Improvement Protocol (TIP) 33, "Treatment for Stimulant Use Disorders," to try to establish more effective practices for their fast-growing population of methamphetamine-addicted clients. Six years later, Prairie Ridge's executive director says that adopting the TIP's client-based treatment philosophy has enhanced the program's accessibility and results, not only for stimulant-abusing clients, but others as well. In this article he recounts how the TIP contents meshed with Prairie Ridge's preexisting treatment philosophy and practices; what they adopted and what they adapted from the TIP and why; counselors' responses during the transition; and outstanding issues.

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In many ways, Prairie Ridge Addiction Treatment Services was well positioned to make good use of Treatment Improvement Protocol (TIP) 33, "Treatment for Stimulant Use Disorders," when the Substance Abuse and Mental Health Services Administration (SAMHSA) published it in 1999. The number of clients coming to us for help with methamphetamine abuse had been rising steeply for a year, and our staff were eager for information on effective treatments. Organizationally, we were beginning to focus on implementing evidence-based practices, which is a primary rationale of the TIP. As well, we were moving toward a client-centered approach to treatment, which accords with the overall thrust of the TIP. For example, we were working to implement Dr. Carlo DiClemente's Transtheoretical Model of Change (Prochaska and DiClemente, 1984), which focuses on engaging clients and recognizing their individual needs, while also recognizing that drug abuse treatment is a gradual process with distinct stages. We had begun accepting clients regardless of their stage of recovery, using motivational interviewing techniques, and trying to "roll with resistance" rather than pushing clients beyond their capabilities.

Our prior decision to move in these directions increased our receptivity to the TIP and facilitated implementation. We are convinced that adopting the evidence-based recommendations of the TIP has enhanced our treatment of methamphetamine abuse, which also is now better attuned to the drug's neurobiological effects. Nevertheless, the process was challenging, and structural factors combined with the nature of the TIP have limited our ability to implement the protocol systematically or to confirm its efficacy in our setting scientifically.

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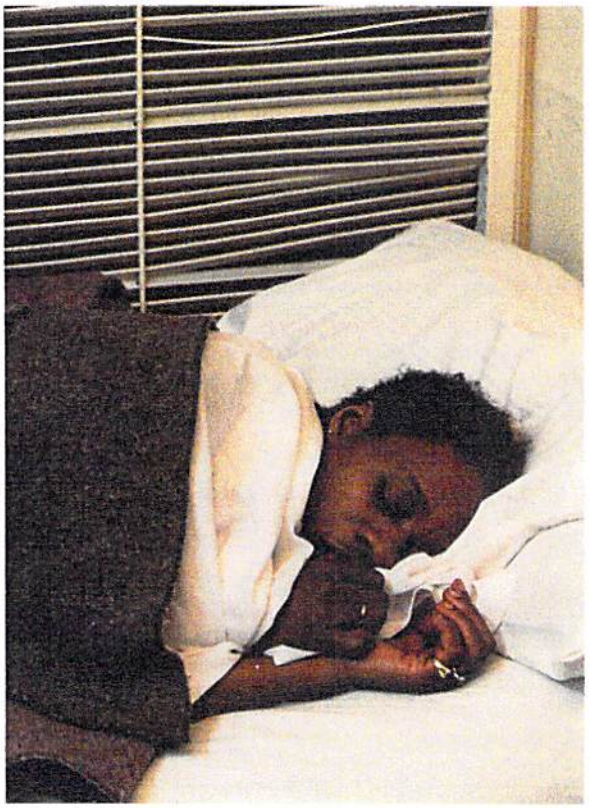

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WHAT WE ADOPTED: CONFIRMED PRACTICES

Prairie Ridge's client population is 93.4 percent Caucasian and 61.3 percent male; 47.7 percent of the population is referred by the criminal justice system, and 84.8 percent report an income of less than $1,000 per month. Although Prairie Ridge had limited experience treating methamphetamine abuse before TIP 33, we had treated other stimulant abuse, mainly cocaine, for many years. We had already implemented, in one form or another, several of the protocols contained in the TIP. The TIP confirmed the validity of these existing practices and also encouraged us to focus additional attention on some of them. We found we could use the TIP without making wholesale changes to our organization and treatment methods, by simply reorganizing existing staff and services.

We focus on the fact that we have another opportunity to help clients after a relapse

Relapse

It is rare for clients to go from active, full-blown stimulant addiction to complete abstinence. Rather, most clients go through a phase during which there are days without substance use and days with substance use (TIP 33, chapter 4).

Like many substance abuse programs, Prairie Ridge historically viewed relapse as a client's lack of commitment to abstinence, but in 1999 we began to recognize relapse as an episode in a chronic illness and started adjusting our policies accordingly. Instead of categorically denying clients reentry after a relapse, we might suggest they try a different treatment environment or prove their motivation. TIP 33, which suggests that "slips" should be regarded not as failures, but as opportunities to reevaluate the treatment plan, spurred us to go further in this direction. We now focus on the fact that clients come back after a relapse, and we have another opportunity to help them. This adjustment in attitude, which we extend to relapse-related behaviors such as missed appointments and resistance, especially during early treatment phases, has significantly increased our retention of clients.

Prairie Ridge staff were especially impressed with the sections of the TIP on relapse prevention, which promotes a focus on identifying the factors that led to the relapse and developing strategies for avoiding them in the future (such as cue avoidance; participation in new, positive activities; and development of coping and stress management skills). Counselors found the TIP's list of specific cues and triggers and corresponding avoidance strategies very helpful.

Of course, neither Prairie Ridge nor TIP 33 recommends that relapses continue indefinitely. Methamphetamine treatment entails working with clients as they struggle with cravings and, in many cases, relapse, but the only successful outcome is sustained abstinence.

Urinalysis Screens

Stimulant-dependent clients in outpatient programs need structure that provides support for engaging in healthy

behaviors. Urine testing is part of that structure. It should not be presented or used primarily as an investigative tool or to test the honesty of clients. Rather, it should be used and presented as a means of support for initiating and maintaining sobriety (TIP 33, chapter 4).

Prairie Ridge has always conducted urinalysis (UA) screens, but TIP 33 broadened our understanding of their importance. Following its advice, we have increased the frequency of screening and now aim to test clients twice a week during the early stages of engagement. Increased screening has not raised the rate of positive findings: More than 90 percent of results are negative.

The staff present the screens as a way for clients to document their abstinence, because many clients contend with people's mistrust and disbelief in their recovery progress. The UAs are a key indicator of success for clients who are answerable to the child welfare and corrections systems, or other authorities with which we routinely share results. We reduce screening frequency as clients progress through treatment, but we warn clients that they may be asked to submit a sample at any time.

WHAT WE ADOPTED: NEW PRACTICES

TIP 33 contains a wealth of information and suggestions related to methamphetamine's effects on the brain and their implications for treating clients. It encouraged us to confront difficult issues that we were aware of, but had not yet fully engaged, most particularly the extreme exhaustion clients feel immediately after entering treatment and the sexual side effects of methamphetamine abuse and withdrawal.

A Period of Rest

The initial period of stimulant abstinence is characterized by symptoms of depression, difficulty concentrating, poor memory, fatigue, craving, and paranoia. The duration of these symptoms varies; however ... they typically last 10 to 15 days for methamphetamine users (TIP 33, chapter 4).

The TIP changed our thinking on new methamphetamine clients who participated weakly or asked to be excused from treatment sessions. It stresses that they may not be unmotivated, as the old-school philosophy assumed, but too exhausted and debilitated by the drug's neurobiological effects to keep up. Accordingly, we scrapped our practice of imposing strict treatment schedules on clients immediately after their arrival. Instead, we now direct our initial efforts toward clients' physical well-being, ensuring that they are well-fed and well-rested rather than expecting them to be awake first thing in the morning and attend group meetings. We have found that clients do not always need the full 10 to 15 days suggested by the TIP before engaging in treatment; in most cases, a few days of downtime monitored by our residential program nurse is sufficient. The implicit message this new approach sends our clients is not simply that they will benefit from a period of recuperation, but also that we understand their needs and state of mind.

We direct our initial efforts toward clients' physical well-being

We extend this policy to clients who are in jail. Instead of transferring them to our treatment center immediately, we send a counselor to the jail to assess the client's needs; if a short incarceration will not be detrimental to the client's health, we ask the county attorney to keep him or her for a week or two. Of course, it is unfortunate that we have to use the prison system in this way, but our counselors have noted that clients are mentally and physically readier to participate and face the demands of the treatment program if they are allowed this initial period of rest. We are convinced that they achieve better outcomes, too.

Sexual Issues

Stimulant-dependent clients can have tremendous concerns and anxieties about the compulsive sexual behaviors they

TREATMENT IMPROVEMENT PROTOCOLS: EVIDENCE-BASED INNOVATION

The Substance Abuse and Mental Health Services Administration (SAMHSA) publishes TIPs to provide clinicians with best practice guidelines for the treatment of substance use disorders. Topics are selected in consultation with substance abuse experts in a wide variety of fields, and each TIP is composed by a non-government-affiliated consensus panel. TIPs are reviewed by a large group of experts before a final version is made available online and in print.

TIPs include a mixture of evidence-based recommendations and "front line" information that has not yet been empirically validated, but has shown signs of success in real-world treatment environments. In their executive summary of TIP 33, the authors state that "The Consensus Panel that developed this TIP tried to emphasize those treatment techniques and principles that have been established with empirical support. However, because the science of treating stimulant use disorders is barely a decade old, the Panel also reviewed and synthesized a set of techniques and principles developed and supported by leading addiction specialists, but with less empirical support." TIP 33, like all other TIPs, clearly distinguishes those treatment approaches that are empirically supported from those that are currently based on consensus opinion.

TIP WORKSHEETS

TIP 33 features 44 worksheets dealing with a wide variety of topics, from identifying signs of stress and managing anger to listing positive recreational and exercise activities. Prairie Ridge counselors found these to be very useful tools for facilitating engagement, as they provided a framework for confronting issues that every client encounters and discussed easily accessible strategies for tackling common problems.

Worksheet #1, which asks clients to plan all of their activities for the day, from 7 a.m. to 11 p.m., may seem overly simplistic, but we found this type of hour-by-hour schedule to be very helpful in ensuring that clients avoid risky behaviors and situations. Similarly, worksheet #2, "Identifying External Cues and Triggers," lays out a simple method of encouraging clients to recognize the people, places, events, and objects that are strongly associated with methamphetamine abuse. This worksheet, used in conjunction with worksheet #4, provides clients with an action plan for times when they are confronted with cues and triggers, allowing them to leave a counseling session with a set of easy-to-remember strategies that they can implement immediately.

engage in while using stimulants .... Client fears should be addressed, such as the fear that sex without drugs will be boring or impossible (TIP 33, chapter 4).

Unless sexual issues are addressed in treatment, they can pose barriers to engagement and retention

Our methamphetamine-abusing clients frequently report that the drug enhances sex and abstinence spoils it. TIP 33 persuaded us that failing to address sexual feelings and experiences in treatment can compromise some clients' chances for recovery. Memories of the powerful sexual urges and sensations associated with the drug can be strong relapse triggers, as can a return to previous relationships or liaisons. The TIP called our attention, as well, to the link between methamphetamine and compulsive sexual activities that clients may look back upon with shame and confusion, such as promiscuous sex, behaviors known to increase the risk of AIDS, compulsive masturbation and pornography viewing, and homosexual behavior by heterosexual individuals. Unless such experiences and clients' reactions to them are addressed in treatment, they can pose barriers to engagement and retention. Although there is always discomfort in talking with clients about sexual issues, the TIP provides counselors with science-based information that allows them to begin questioning clients and helping them work through their issues.

Methamphetamine and the Brain

Of all the changes TIP 33 prompted us to make, the most overarching and consequential was to adopt as a central basis for our activities the protocol's extensive information on how stimulants affect the nervous system and change feelings, emotions, and behavior. Chapter 2 describes the fundamentals of the nervous system, the role dopamine plays in the brain's reward system, and the way that harmful behaviors, through positive reinforcement, can become repetitive. It also catalogues the deleterious psychological effects of methamphetamine abuse and withdrawal.

This information comprised the conceptual basis for our revised policies of giving clients rest, addressing sexual concerns, and rolling with resistance rather than confronting it. The information persuaded some counselors to cooperate with the new policies even though their previous experience and instincts argued that such "leniency" was inappropriate. Several staff commented as we began to implement the protocol that clients were not showing any real signs of progress, yet counselors were being asked to continue to devote valuable hours and resources to their treatment. These concerns faded as the counselors began to see improved engagement and results.

Counselors use the TIP's information on methamphetamine's neurobiological effects to ease clients' common fears that they may have damaged their brains or contracted a mental illness while abusing methamphetamine. Many clients are relieved to learn that the emotions and sensations that they have been feeling—such as euphoria, paranoia, auditory hallucinations, and violent behaviors while using followed by drastic drops in mood and energy levels and severe depression after stopping—are direct biological consequences of the drug rather than symptoms of an underlying psychological condition.

Based on information in the TIP about the brain's ability to repair itself over time, we tell our clients that current research gives grounds for hope that their symptoms will abate with abstinence, sleep, and good diet. We say this even though the research cited in the TIP suggests that chronic methamphetamine abuse has some long-term effects, such as decreased dopamine levels that can last as long as 4 years and psychotic symptoms that can sometimes persist through years of abstinence. We feel it is important, nevertheless, for clients to focus on the positive effects of abstinence rather than potential long-term problems they may or may not have to face.

Finally, we no longer encourage methamphetamine clients to consider using an antidepressant. The TIP's authors stress that empirical data have not shown that

these medications increase either retention or abstinence. The key to managing psychological symptoms is time away from the drug.

ISSUES IN IMPLEMENTATION AND EVALUATION

Implementation of TIP 33 at Prairie Ridge was considerably facilitated by the 44 worksheets included in the protocol (see "TIP Worksheets"). Nevertheless, the process was not simple, and we have not been able to evaluate results objectively.

Implementation

As mentioned, some staff entered the transition to the protocol's tolerant, client-centered approach with reluctance, although all ultimately recognized its validity. A more fundamental challenge for us was structural.

Prairie Ridge's programs follow the recommendations of the American Society of Addiction Medicine (ASAM), which promote multiple levels of care, including residential programs, halfway houses, day programs, partial day programs, evening outpatient care, and continuing care. To offer counseling to groups at all these levels of care with the resources available to us, we must mix together clients who are addicted to a variety of drugs. We do not have enough counselors to form groups of only methamphetamine users, only cocaine users, and so on.

We therefore could not implement all the TIP 33 recommendations, as some are irrelevant for clients who abuse drugs other than stimulants. For the recommendations we did adopt, we needed either to assume they would be helpful for all clients, even though they were validated only for stimulant abusers, or to use them only in individual sessions with methamphetamine clients. Ultimately, we compromised. We present most of the information to methamphetamine-abusing clients during individual counseling sessions, but we also use some recommendations in group sessions, such as giving gift coupons to encourage attendance.

We have found the overall philosophy of the TIP to be applicable to all forms of drug abuse treatment. The protocol stresses that the initial period of engagement is critical to the overall success of treatment, and we found that many of the strategies for engaging clients could be applied to all of our clients. We have instituted the client-focused approach across the board, presenting multiple treatment options and allowing clients considerable say in which they receive. Some of the worksheets included in the TIP seem to work well with many types of clients.

Evaluation Hurdles

Several factors prevented Prairie Ridge from objectively evaluating the effectiveness of the protocols recommended in TIP 33. To measure the success of any new intervention, a program must implement it with fidelity. The fact that we did not make use of every recommendation in the protocol in the exact manner it was prescribed, as well as the fact that we were already using some elements before its publication, prevented us from effectively evaluating the protocol.

We found the overall TIP philosophy applicable to all forms of treatment

TIP 33 is not presented in the same manner as many other treatment manuals. The protocol is presented as a kind of cookbook, where some of the recommendations have been scientifically validated while others have not, and programs or individuals can decide for themselves how best to use the information. The manual does not lay out what a counselor should present during the first treatment session, the second session, the third, and so on; many details of implementation are left up to the individual treatment programs and counselors. It therefore is very difficult to determine the extent to which the TIP has been implemented and, consequently, its effect on the client population.

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To determine if a manual such as TIP 33 is effective, executive directors and supervisors at treatment centers need to agree on a specific method of delivery and implement a monitoring system that holds counselors account-

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Parental rights terminations have dropped

able for following the agreed-upon rules. Because of our method of implementation, we do not have data on whether our outcomes have changed since implementing TIP 33. Although we cannot quantify improvements across all Prairie Ridge facilities, we have plenty of anecdotal evidence suggesting that the program has been effective. Moreover, one of Prairie Ridge's smaller treatment programs has been more closely monitoring certain outcomes, which so far have been quite positive.

Our facility in Algona, Iowa, received state Department of Human Services (DHS) funding for a program to reduce out-of-home placements of children and terminations of parental rights resulting from methamphetamine abuse. Phil Heath, director of the Algona treatment program, employed TIP 33 to achieve these goals. In the past 2 and a half years since implementation of the TIP, there have been only two parental rights terminations because of methamphetamine abuse by parents subsequent to treatment, which is a significant reduction compared with past years. UA-confirmed abstinence rates during 2004 and 2005 were between 70 and 80 percent. In addition, in 2004, 62 percent of children who had been placed out of the home were returned to their birth parents. Nearly 100 percent of clients reported to DHS that they were satisfied with the treatment services. The original DHS grant was intended for a period of only 6 months, but success rates were so impressive that it has now been extended three times over the course of 2 years. The program also has been nominated for an award at the annual Governor's Conference on Substance Abuse.

CONCLUSION

TIP 33 broadened and deepened our understanding of the neurobiological effects of methamphetamine and the way that they affect clients in treatment, and also gave us a roster of evidence-based and consensus-based procedures from which to choose. We adopted the TIP's overall client-centered philosophy and instituted new policies of giving clients a period of rest before beginning treatment, treating relapse as an event in recovery rather than a termination of it, addressing clients' sexual problems, and conducting more frequent UA screens. We extended some of the approaches suggested by the TIP to clients being treated for abuse of drugs other than stimulants.

Largely because of our client mix and resources, we were unable to collect data to measure the impact of the TIP on our clients' outcomes. Accordingly, we are left with the question: Should the fact that the TIP interventions have been proven effective in other settings add significance to our very strong clinical impression that they have helped our clients?

CORRESPONDENCE

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RESPONSE: TIPSTERS WEIGH IN: PUTTING GOOD SCIENCE TO WORK

Felipe Castro, M.S.W., Ph.D.; Richard A. Rawson, Ph.D.; and Ewa Stamper, Ph.D.

Richard A. Rawson chaired and Felipe Castro and Ewa Stamper served on the 15-member consensus panel that created SAMHSA's TIP 33: Treatment for Stimulant Use Disorders.

Richard A. Rawson: The paper struck me first of all as a valuable personal account of a treatment program achieving positive outcomes with methamphetamine abusers. There has been a pervasive, unsubstantiated rumor that meth abusers do not respond to treatment. Recent studies (e.g., Hser, Evans, and Huang, 2005; Rawson et al., 2004; Roll et al., 2006) have begun to dispel that myth and prove that community treatment can produce results. The Prairie Ridge experience provides a clear instance of that.

I am pleased that Mr. Hansen felt that the TIP enhanced the tools and strategies they were using, and that it got a positive response from the staff.

Ewa Stamper: In my opinion, the program used the TIP extremely appropriately. They understood the most important thing, which was the client-centered, nonrigid approach. They also adopted the TIP's way of looking at relapse as a normal phenomenon in early recovery rather than treatment failure, and the need for a rest period before starting treatment. They got the key concepts; the details aren't so important.

Felipe Castro: Prairie Ridge seems to have done a good job of taking good science and modifying it as necessary to make it work in their circumstances. Unfortunately, other programs sometimes change things they don't like, take things out that aren't convenient, and end up with a watered-down rendition of the treatment that is unlikely to be effective. I call that mis-adaptation, as opposed to adaptation.

Rawson: We didn't intend the document to be a treatment manual. Our idea was to introduce ideas and concepts and allow clinicians to employ those they found useful. In that light, Mr. Hansen's struggles to apply TIP 33 with mixed groups of patients, not all of whom abused meth, were very instructive to read about. While there is good agreement that the patient-centered approach applies to all drug treatments, there have not been a lot of comparative studies on whether a particular set of protocols that was designed to treat one set of patients can also be used successfully with another. Without those data, I think clinicians logically should determine for themselves which strategies to apply widely and which only narrowly.

Castro: It is inevitable that clinical judgment will come into play in these situations, but it is important that these decisions aren't made haphazardly. Ideally, we should be able to teach clinicians how to make adaptations based on their local situation without removing the treatment from the context of the original, evidence-based approach.

Stamper: I was especially impressed by the spirit of continuing education and openness to new ideas among the staff at Prairie Ridge. Unfortunately, I don't think that's typical of rural or smaller centers. At least here in Hawaii, treatment providers sometimes tend to distance themselves from the research community and to be entrenched in what they know and what works for them.

Neurobiological and gender issues

Rawson: I found it very encouraging that the author made use of the information on the neurobiological effects of the drug on the brain. For many treatment programs, the idea that neurobiology is relevant to treatment and recovery is revolutionary. I also was gratified that Prairie Ridge utilized the information on the sexual effects of meth abuse. I think that is an understudied area, despite its obvious importance to drug abuse treatment.

Stamper: The author's remark that there is inevitable discomfort when counselors talk about sexual issues made me sad, though it's understandable. It will be best for everyone if this discomfort is eliminated. Frankly, the more counselors are prepared and knowledgeable and practiced in talking about these issues, the less discomfort there is for both parties.

Castro: Most drugs cause sexual problems, either fueling or suppressing sexual drive. These problems may be more pronounced with stimulants than with other drugs.

I've been conducting research in a community residential program where we see only men. Almost all our patients have sexual problems and also problems with their families, where their role as protector and provider has been damaged by their drug abuse. The program addresses sexual issues as an important part of these broader gender and relationship issues that must be faced in treatment. In many cases, addressing sex and gender issues is a necessary step in helping patients return to society and their families, where there is a need to reconnect after the relationship has been damaged.

Stamper: Sex means different things for different genders. For female users, sexual issues are very often intertwined with issues of trauma, sexual abuse, and violence. They may also involve exchanging sex for drugs

(the dealer "boyfriend"), as well as prostitution. These things do tie together and they need to be addressed more and more.

Evaluation: Always recommended, always possible

Castro: I was disappointed that the author believed they couldn't evaluate their innovations because they were unable to implement the TIP with absolute fidelity. I think we can always evaluate, albeit with varying degrees of precision. All programs should be committed to some level of monitoring so that corrections can be made during the treatment process. Even asking a very simple set of questions in an exit interview, such as, "How much did the client like the information?" or "How effective did the client find it on a scale from 1 to 5?" can give a broad, but useful, idea of the efficacy of treatment.

Rawson: Consumer and staff satisfaction surveys are useful and relatively straightforward to do. In our program, when we implement new strategies and treatments, we monitor whether or not they improve retention. That is useful because people who stay in treatment longer do better. Drug screens can be used in a similar manner. A program can look at the 50 patients they treated before the change was implemented and the first 50 patients after and compare the results of their urine screens.

Stamper: I especially like the retention measure. It is certainly doable, and it's also immediately practical, through its connection to reimbursement. However, we do need to acknowledge that even the simplest measures require at least some investment of time and money. Everybody in a treatment program is overworked and usually no special funds are available for someone to sit and crunch these numbers. So the reality of the situation is: the simpler, the better.

Next steps

Stamper: I have been advocating for a revision to TIP 33 for several years. We know much more today than we did when we were writing it. A revision could incorporate new knowledge on issues such as special populations and neurobiology, as well as new evidence from clinical trials. I would also like to see an acknowledgment in the TIP that the majority of patients in treatment centers abuse multiple drugs. We could advise clinicians such as Mr. Hansen on how to deal with this issue, which he rightly treated as a major concern.

Castro: NIDA's big developments in neuroimaging research should be included in a revision.

Rawson: I would second that idea. The brain imaging work has taught us a lot about how some areas of the brain that meth impacts recover with abstinence, how that influences people's behavior during recovery, and what kinds of treatment techniques can be useful. We also now have a significant amount of clinical treatment outcome literature on both cocaine and methamphetamine, so there is a wealth of new information we could use to expand treatment recommendations (Rawson, Gonzales, and Ling, 2006).

Stamper: In addition to updating the TIP, I would suggest that we try to improve our methods of dissemination. The TIP has not had much of an impact in my community.

Rawson: We've received very little feedback about the TIP. I have heard from programs in Iowa, which has mandated its use as a guide for treating methamphetamine abuse. The reports have been mixed. Some people, like Mr. Hansen, appear to have programs where people are open to new ideas. Other places have told me, "We don't see anything new about this. It's what we've always done." That's a response I've been hearing for 30 years from people who base their treatment approach on their personal values and beliefs and don't want to be confused with information. Luckily, there is increasing awareness of the term "evidence-based practices" and the need to do things differently.

Stamper: Researchers and technology transfer groups need to find ways to disseminate science-based practices that fit counselors' cognitive styles. Among the Hawaiians in my community, and I imagine some other ethnic groups, the oral tradition is very strong. They will welcome face-to-face presentations with in-depth learning opportunities, but probably won't pick up a thick book. Counselors with less formal education tend to think very concretely. For them, a less conceptual, more cookbook-like presentation might work better. You don't need to have a broad conceptual framework to assimilate information creatively. &

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Quality and Performance Improvement: What's a Program to Do?

A confluence of forces is challenging traditional approaches to issues of quality in substance abuse care. The availability of effective, research-based interventions, the Federal emphasis on performance measurement and outcomes, and national initiatives to improve quality and data infrastructure are driving a transition from a static, compliance-oriented approach to a more dynamic performance improvement model. This new way of achieving and documenting quality will produce better outcomes for consumers and greater confidence in the value of substance abuse services, but first it will require new behaviors from all parties involved in the delivery of substance abuse prevention and treatment services. This article describes some of the shifts already under way and offers advice on how organizations can get ready for the coming changes.

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Consider the following situations:

While cleaning your 16-year-old daughter's room, you come across a stash of pills. You've been aware of several changes in her behavior and attitude over the past 6 months. Her grades are down, and she has become surly and secretive; but you've been telling yourself not to worry, as surely all teenagers go through these phases. Now, standing in her room, you have the sinking feeling that your child is in trouble. After a heated confrontation with your daughter, you decide to call your managed care plan, which gives you the names of several programs and therapists available under your coverage. But how do you choose among them? You feel you may be confronting one of the most significant moments in your child's young life, but how do you decide whom to call, with your daughter's future possibly hanging on the decision?

You're the assistant secretary for human services in the Governor's office. You've been a thoughtful advocate for the needs of people with behavioral health disorders. This year's budget is going to require cuts in the substance abuse service delivery system. You dislike the "percentage cut across the board" approach to system management. You've visited programs and have a feel for which programs appear to work better, but you realize that your subjective opinion based on a limited number of site visits will hardly carry the day if programs are cut selectively. How can you manage the downsizing process so that it has the least possible impact on the overall effectiveness of the system and the care delivered to people in need?

A lack of quality information isn't the only challenge facing parents or system managers. Often, the available information is contradictory or lacks sufficient rigor