Public Safety Substance Abuse Newsletter

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MEDTOX Journal Announces Plans for the New Year

Welcome back readers! We'll skip the usual banalities of post-New Year's greetings and get right to work. 2011 will be a year of important changes for the MEDTOX Drug Abuse Recognition (DAR) Journal. In addition to the continued publication of our *public safety* mainline news publication; we are planning the launch of two new efforts. The first is a special publication for readers who work in the field of pain management (psychiatry and anesthesiology). This new journal will deal with the parochial issues that physicians and other healthcare professionals face in the course of providing pain management services to their needy patients. We believe that this publication will explore areas of need and concern that the mainline journal does not adequately reach. Next task for us is the development and publication of a third journal devoted to issues associated with substance abuse in the workplace. We hope for roll out of this final iteration of our news journal sometime before June 1, 2011. This publication will consist of specific content designed to identify and explore issues germane to readers who have responsibilities for dealing with challenges of public and private sector workplace drug and alcohol abuse. Readers may subscribe to one, two or all editions of the Journal. Only the Public Safety edition will run on a monthly publication schedule. Initially, the two new Journals will be published, on a quarterly schedule.

Subscriptions to MEDTOX's news journals are free of charge. For many of our readers, a regular subscription to the newsletter garners vital professional continuing education credits. MEDTOX news journals are devoted to news reporting and scientific analysis on important matters. Our publications are not a point of sales or marketing.

Finally for 2011, MEDTOX announces the establishment of an editorial board for the Public Safety edition of the news journal. We're looking for volunteers. Readers with backgrounds in writing and research are encouraged to contact us by email. Interested participants should send us a resume and a cover letter to DARSProgram@Mac.com. Please indicate in the subject line: *Application for Public Safety Editorial Board.*

The Public Safety Journal has identified the following objectives for each of our 2011 editions. We will publish twelve distinct issues as well as up to two dozen special "*be on the lookout*" drug abuse and legal advisories. Our editorial objectives for 2011 are:

- Evaluation and analysis of emerging trends in the manufacture and abuse of designer drugs.
- Research and reporting on issues pertinent to adolescent and young adult substance abuse. Analysis of junior high and high school drug abuse trends as well as evaluation of contemporary treatment methods will be undertaken.
- Identification and review of best practices in the treatment of adult substance abuse disorders. Treatment strategies and discussions of the complexities posed by dual diagnosis cases will be taken on.

There will be other subject matter taken on by Journal staff. But a driving force in our publications will be the effort to explore and report on important developments in each of those areas identified above.

So hitch up your belt, stiffen your back and here we go! We wish all of our readers a safe, prosperous 2011.

The staff and writers of the MEDTOX DAR Journal.

A Current Affair: Miley Cyrus Spurs Interest in *Salvia Divinorum* Use

A recent *YouTube* video of teen superstar Miley Cyrus taking a "hit" from a plastic water bong has brought national attention to a hallucinogenic substance called *Salvia*. Marketed and sold for non-human consumption as incense, *Salvia Divinorum* is actually a weed in the same botanical family as more familiar plants such as *basil, mint, rosemary, sage and oregano*. One of *Salvia's* more common street designations is "diviner's sage."

The active ingredient of *salvia divinorum* is known as *Salvinorin A*. For readers who are trivia hounds, Salvinorin A is not an alkaloid. It is the first documented diterpene hallucinogen. *Diterpenes* are a type of *terpene*, which represents a large class of organic compounds produced by conifers, or cone-bearing plants and trees. For those readers who know of drug users who smoke pine cones, you now know why.

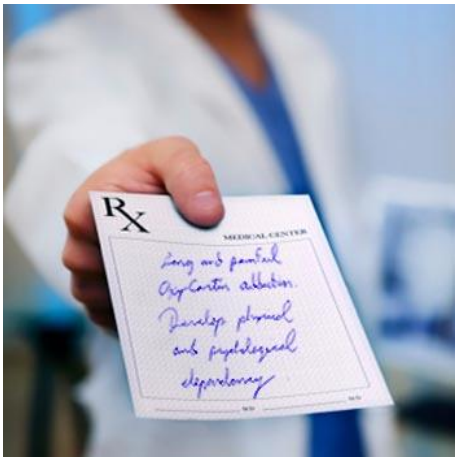
Salvia has history as a cultural and religious agent for greater consciousness. The use of the drug pre-dates the birth of Christ and has long figured in religious practices of indigenous Mexicans who once occupied Oaxaca. In days of old, Salvia leaves were crushed and chewed like tobacco. It was also brewed into a tea and made into tinctures that could be quickly ingested for a fast moving high. Fast forward to Miley Cyrus. It is *Salvia's* quick hit, one that skirts criminal statutes that seems to attract people to it. By smoking the crushed *Salvia* leaves, users experience a high that hits its zenith within 60-90 seconds. The rub is that the high does not last long. For most smokers of *Salvia,* the euphoria and hallucinogenic experiences will not last more than 10 minutes. Of all known hallucinogens on the streets today, *Salvia* is considered the shortest acting. But for the few minutes of intoxication, a user can experience myriad effects. YouTube is the repository for a variety of recordings that document the direct effects that *Salvia* has on users. Some pass out, others become catatonic, and others yet break into crying or laughing jags. Each user's experience seems to be different, with some finding the high to be very unpleasant and scary.

Classified as a hallucinogen for DAR and DRE evaluation purposes, *Salvia* does not seem to interact with the same neurotransmitter systems (serotonin and dopamine) that more potent controlled substance hallucinogens like LSD and mescaline do. In fact, the drugs precise method of action is unclear. Symptoms of *Salvia* intoxication are somewhat similar to those found with tradtional hallucinogens with reports of time, space, and sensory distortions. But field reports from MEDTOX's DAR and DRE instructors are tending to indicate that seminal symptom-related heart rate and pupil size appear to be relatively unaffected by the use of the drug. Drug testing for *Salvia* is a challenge. Salvia's lightning quick effects means that it is a drug testing phantom. At present, there are no field testing systems for *Salvinorin A*, the most relevant of *Salvia* ingredients. Laboratory based testing is a rarity. When testing is available, it is expensive. The drug does not appear to be addictive, nor does it seem capable of causing physical dependency. That does not mean that some users may engage in compulsive or serial use of the drug. But it can be expensive. The drug is sold in varying degrees of potency and quality in marijuana *head shops*. Some medical marijuana dispensaries also make the drug available to their qualified patients.

In the opening days of *Salvia's* current run, it was averred to be a legal substitute for marijuana. And for a while, that is what it seemed to be. But with the emergence of *K2-Spice* and a slew of true designer cannabinoids, *Salvia's* popularity took a hit. But one well-placed celebrity endorsement can change the trajectory of any product or commodity. And Miley Cyrus was *Salvia's* well-placed endorsement. Click Here to Watch CNN Video Report on Salvia

New Year's News: Prescription Drug Fraud Overwhelms Law Enforcement Agencies

The New Year has ushered in an ever-burgeoning crime trend, the diversion of powerful



prescription drugs to the streets of American communities. *Vicodin, Oxycontin, Percocet,* and *Valium* head the list of controlled substances that are literally flowing through scams and various criminal enterprises to the streets. The nightly news is filled with these reports, special news bulletins announcing some big raid or another that has vanquished the latest iteration of prescription drug cartel. The market is immense. It involves exploitation of state Medicaid and federal Medicare programs. The poor are targeted for their availability to "smurf" prescriptions for both scrupulous and unscrupulous doctors. Vulnerable targets in the ranks of the unemployed are approached by drug dons and hired in as "mopes" who then are organized into roving gangs of patients who ply "pain management" clinics for prescriptions of powerful narcotics and sedatives. Paid cash for their services, these fraudulent patients hand over their prescription drugs to operatives. The operatives then dispense the narcotics to various distribution systems in the community. The end result is huge caches of powerful prescription drugs on the streets for sale that compete with traditional illicit drugs like heroin, methamphetamine, and marijuana. The matter is made even worse by the recent evolution of designer cannabinoid drugs called K2 and Spice. These so-called *not-for-human consumption* drugs often skirt controlled substances laws and end up as *de facto* over-the-counter drugs that are as intoxicating (or more so) as some of the more potent strains of the sativa marijuana plant. The streets are awash in a bonanza of prescription and designer drugs these days. And the situation will not be getting better any time soon.

Law enforcement agencies have been caught flat footed by these developments. Trained and prepared to deal with the abuse of traditional illicit substances such as heroin and methamphetamine, explosive pharmaceutical drug diversion caught police and other public safety groups by surprise. Abusable prescription drugs are to say the least, myriad. Cops normally do not carry copies of the Physician's Desk Reference (PDR) in their back pockets. But nowadays, they probably should. The landscape of substance abuse is changing. Oxycontin subverts heroin. Marijuana is superseded by K2 and Spice. Even buprenorphine, a drug designed to help opiate addicted patients detoxify has been distorted and branded into a niche drug of abuse. Innocuous prescription drugs, analgesics, muscle relaxants, and sedatives have become the rage.

Much of the prescription drug-abusing world flies under the community radar. People high on prescription drugs do not attract attention like someone under the influence of methamphetamine or LSD. Nevertheless, prescription drugs can be as seductive and addictive as any traditional illicit substance on the street today. One of the most potent contemporary prescription drug concoctions is the drug combination of the barbiturate-based muscle relaxant *Soma* and the hydrocodone product *Vicodin*. Police find that most rogue pain clinics specialize in the writing of prescriptions for those two drugs. Soma and Vicodin are a potent duo. *Oxycontin* and oxycodone products are sometimes substituted for Vicodin. Oxycontin's new "OP" formula has made it less susceptible to abusive manipulations. Because of these changes, the street value of the drug has dropped.

On the east coast, the *Soma-Vicodin* combo often includes the addition of a third drug, *Xanax*. Xanax is a powerful sedative member of the benzodiazepine family. Users frequently cite "loads" of Soma-Vicodin-Xanax as being more powerful and euphoric than heroin. As dangerous as these prescription "loads" are, they are literally flowing out of doctors' offices and clinics and out into the streets. To be fair, much of this trafficking is conducted by a small number of outlaw pain clinics that are in cahoots with roaming organizations of fraudulent patients who are loosely

organized into roving cells that move from community to community. A good chunk of their fraud is perpetrated on the backs of state and federal healthcare programs. But in the main, the pill business is cash and carry. Cash means fewer records, less paperwork, and less evidence.

Adding to the cash and carry business of prescription drug abuse in 2011 is cough syrup diversion. Called *Lean or Purple Drank*, a special brand of cough syrup has been concocted into a hip, popular club drug. In the fall of 2010, there were a series of reports of seizures and arrests for distribution of promethazine and codeine cough syrup. This purple, viscous liquid is mixed with Bubble Up or 7-Up, along with watermelon Jolly Rancher candy. Mixed with cubed ice, the beverage is then sipped and nurtured like a martini. But instead of getting a jolt of alcohol, imbibers experience a synergistic splash of opiate and sedative. In some parts of the country, alcohol is added to this cough syrup drink. Promethazine is widely known in a brand form of drug called *Phenergan*. As *Phenergan*, the drug is utilized to subdue unproductive cough; the drug is also used to control nausea and vomiting. Promethazine is sedating; in fact, it can be very sedating. When mixed with codeine, the overall level of sedation can be quite pronounced. A typical prescription dose for promethazine and codeine consists of 5 ml of liquid syrup. Over the course of a typical evening, a Lean drinker may consume 10 times that amount (50 ml). The hazards of drinking an opiate and sedative cocktail are significant and made all the worse by adding some form of alcohol to it.

2011 will bring many surprises. But abuse of prescription and designer drugs will head the list of New Year headaches for our readers charged with public safety and rehabilitation.

Name That Drug: "Can You Hear Me, Can You See Me?"

This month's drug can lead to rather bizarre and unpredictable behaviors. It is not PCP. It is not even LSD. In fact, this month's drug is not an illicit drug at all. This drug is an arguably safe prescription drug. The drug is widely abused and has carved out a very distinguishable and unique profile of symptoms and problems for those who become involved with it. Although a prescription is required to obtain the drug, it is not technically a controlled substance. This month's drug is a relatively new phenomenon. It emerged as a drug of concern for law enforcement and treatment professionals just a few years ago. It is available in a brand name and generic format. Recently, an extended-release formula of this substance became available on the market. Serendipity has led to the discovery that this month's drug may be an effective means to reduce symptoms of schizophrenia in some patients. Sadly, the drug is a threat when used as a knockout drug in instances of drug-facilitated sexual assault. The drug has had a curious trajectory since its introduction to the marketplace over 20 years ago.

This month's drug exerts its influence on the central nervous system by activating GABAA receptors. In this respect, the drug works like a benzodiazepine (Valium, Xanax etc.) even though it is not one. Similarly, a drug used to reverse the effects of benzodiazepines (flumazenil) also stops the acute sedative effects of the drug. The drug is fast acting. Because of the drug's activation of GABAA receptors, its overall effects are hypnotic. With rapid onset, the drug swiftly and efficiently brings about sleep. A member of the imidazopyridine family of chemicals, this drug is considered to be atypical of other sedative-hypnotic drugs. Ordinary use of the drug has led to bizarre and unpredictable side effects. In fact, an entirely new sleep-walking phenomenon has been created by patients who had been prescribed this medication. *Somnambulism* normally involves a transitory period of time where young boys (mostly) arise from bed--and while in a deep sleep--walk around the home. There is no known cause for sleepwalking. But this month's drug seems to be an introit to sleepwalking, a substantial clue to the identity of this month's drug. In cases of ordinary utilization involving this drug, sleepwalking patients have been found in their kitchens cooking meals or discovered cleaning the house. Some

patients have even been stopped by police driving a car. When encountered, these sleepwalkers appear to be in a trance-like state, unable to hear or respond to commands. A common denominator in these unusual cases of somnambulism was the prescription use of this month's drug. Those most affected by the drug's somnambulatory powers appear to be newer users of the drug. Patients who have used the drug for extended periods of time seem to develop a tolerance to some of the drug's sedative effects.

This month's drug has accrued a curious following of recreational drug users. The drug is more popularly abused by young adults. Found in the club scene, the drug is a favorite alternative for "ravers," a term used to describe men and women devoted to the use of *Ecstasy (MDMA)*. The drug is especially well suited with female "ravers." Sometimes combined and used concurrent to Ecstasy, this drug can lead to symptoms that can be difficult to control. In cases where alcohol is combined with this drug, the resultant symptoms of intoxication can quickly spin out of control. The effects when mixed with alcohol are synergistic. The sedative and impairing effects of both drugs can be profoundly debilitating and underscores the threat that these two sedative drugs pose as agents of facilitated sexual assault.

The drug is also proven to be popular with methamphetamine abusers. It is used as an antidote by "speed" users to help simmer down after an extended run on the powerful stimulant. The "tweaky" high of methamphetamine can be softened with the use of this month's drug. But the drug is not all that easy to use. Because the drug is a hypnotic, it is hard to not pass out once it has been taken. And therein creates the user's challenge. How much of the drug can be taken before somnolence takes over? Not much.

The drug is produced in two sizes and concentrations: 5 mg and 10 mg. There is an extended release version that is not as popularly abused as the instant release versions. Typically, half of a 5 mg, or a quarter "tip" of a 10 mg will suffice to bring about sedation, but not quite sufficient to initiate sleep. Recreational users of the drug basically put themselves in a situation where they spend significant resources fighting the effects of the drug; the struggle can be exhausting. But if an appropriately intoxicating dose of the drug can be established by its user, an interesting set of signs and symptoms will set in.

Someone under the influence of this month's drug will exhibit signs and symptoms such as the following:

- *Catatonia:* a seemingly incoherent relationship with the here and now.
- *Nystagmus:* an involuntary jerking of the eyes as they pursue a laterally moving stimulus.
- *Lack of convergence*: the inability of the eyes to cross as they track an object that approaches the nose.
- *Decreased pulse*: a reduction in the heart rate below 60 beats per minute (dose dependent).
- *Slowed internal clock:* The internal gauge for the passage of time is slowed (dose dependent).
- *Pupillary reaction to light:* The reaction to direct light into the eye will be slow.

The overall symptomology caused by this month's drug is a central nervous system (CNS) depressant. For those users encountered on the street while under its influence, the signs of intoxication described above will likely be quite noticeable. Onset of nystagmus may be immediate. In addition, there is the distinct probability of vertical nystagmus. This is a drug that initiates immediate signs of depressant intoxication. Users will exhibit a slow and stuperous speech pattern. Language will be hard to verbalize and words are likely be slurred. Expect enunciation to be exaggerated and slow. Eyelids will probably be droopy and the mouth will be dry.

This month's drug is a hot topic at the lunch table of many organizations engaged in detoxification and treatment. Many physicians believe it to be a safe drug to prescribe to addicts. But it is far from safe. It is a good drug for the non-addict community who are in need of a sleep aid. It is a loaded gun to the heads of those who are addicted. Recently available as a generic drug, the prescription and street prices for this drug have dropped. In California, a 10 mg tablet of the immediate release form of this drug is $5. The price is higher for states east of California. In Hawaii however, the price is $25 for the 10 mg form of the drug. The higher price in Hawaii is a result of the popularity of this month's drug as an antagonist to "ice," an extremely potent form of methamphetamine.

For those readers still wrangling with the identity of this month's drug, do not feel bad. This abuse of this month's drug is one of the more difficult profiles to accurately identify. But calls to the MEDTOX DAR Hotline tend to indicate that the abuse of this drug is much more common than anyone or any organization believes.

This month's drug: *zolpidem tartrate, aka Ambien*.

BoCoMo Dew Synthetic Marijuana Has Southeast U.S. Drug Authorities Worried

Southeast U.S. clients of MEDTOX have reported an uptick in the abuse of a product called *BoCoMo* Dew. The product is herbal incense that is designed to be smoked and inhaled to mimic the effects of marijuana. A recent DEA ban of synthetic marijuana products failed to list the THC-like ingredient of this product. Identified as synthetic cannabinoid JWH-250, *BoCoMo Bay's* product is technically because JWH 250 was not specifically identified and banned by the DEA action. But under an analog provision of the bill, it may be subject to enforcement and regulatory penalty. Like *K2* and the variety of *"Spice"* products that are on the market, synthetic cannabinoids can pack a wallop. Although most synthetics have shorter half-lives than marijuana, the synthetics can surprise users with a more powerful high. For some users, that is the objective.

Like other synthetic cannabinoids, this product skirts federal law and most state laws. Several MEDTOX DAR Hotline callers have recently asked whether or not BoCoMo Dew is the same product as JWH-268. Readers by now recognize the initials JWH as relating to the research chemist who pioneered the investigation of these compounds. JWH-268 appears to be nothing more than a prosaic numerical addition of 18 to 250 (= 268). As far as Hotline staffers are aware, the *BoCoMo* product is solely made of JWH-250. It is becoming clear that there are a variety of one-off blends on the street that have mixed various JWH compounds together for enhanced effects. It does not appear that *BoCoMo* is one of them.

Stay tuned to the MEDTOX DAR Newsletter for more information relating to the emergence of designer cannabinoids and the state and federal actions designed to control them. Important updates will be passed along to our readers as soon as we have had a chance to evaluate and substantiate the information that we have received. Readers are encouraged to email us with questions and information that may be pertinent to our continued reporting on these trends.

FDA Advisory Panel Recommends Ban On Vicodin and Percocet Products

An FDA advisory panel recently voted 20-17 to recommend the withdrawal of popular analgesics Vicodin and Percocet. The action was not taken against the opiates themselves, but rather it was directed at acetaminophen, the over-the-counter painkiller found in Tylenol. This vote by the FDA advisory committee does not lock the FDA into a particular action on this matter, but the FDA does have a habit of following advisory committee recommendations. Both Vicodin and Percocet contain opiate controlled substances that are blended with acetaminophen for the purpose of enhancing pain control. Vicodin contains hydrocodone in mixture with acetaminophen; Percocet contains oxycodone mixed with acetaminophen. There is a wide array of opiate and acetaminophen products on the market today; the bulk of the products are made up of generic opiates mixed with either 325 mg or 500 mg of acetaminophen.

Abuse of Vicodin and Percocet is widespread. These drugs can create a stubborn drug dependency. Tolerance develops to the abuse of these drugs. In some cases, Vicodin addicts may develop a habit of 40-50 hydrocodone-acetaminophen tablets daily. Some egregious cases have reached levels that are double that. Ironically, the most serious physiological damage of this prescription substance abuse stems from the noxious effects of acetaminophen on the liver and other organs. The effects of the included opiate are benign in comparison. The problem is worse if the patient using Vicodin or Percocet is also using alcohol. The deleterious effects on the liver are compounded with alcohol use. Vicodin and Percocet are frequently combined with other drugs to achieve a special enhanced effect and more powerful euphoria. At present, these two drugs are routinely bundled with a barbiturate-like skeletal muscle relaxant called *Soma* (carisoprodol). In suburban neighborhoods, Xanax (alprazolam) or Ativan (lorazepam) may be included to create a drug trifecta. Users of the three-drug combination describe the mixture as a modern "drug store heroin."

For some time now, prescription drug abusers have heeded advocate advice to shift their analgesic use away from narcotics that are compounded with acetaminophen. Many prescription drug abusers are aware that acetaminophen toxicity presents problems. Products containing smaller amounts of acetaminophen have become increasingly more powerful. *Norco* for instance is a hydrocodone product with a lesser amount of acetaminophen in it. Oxycontin is a product that contains no acetaminophen; it is 100% oxycodone. Unencumbered by acetaminophen, Oxycontin is more easily converted and prepared into a drug that can be illicitly used. More experienced prescription drug abusers have taken to smoking Percocet while others have chosen to inject the drugs intravenously.

Readers who deal with clients and patients who have prescription drug abuse histories should be sensitive to the potential problems caused by extended exposure and ingestion of acetaminophen. Liver disease secondary to prescription drug abuse may take years to manifest itself following rehabilitation and sobriety. Primary care physicians and family medical professionals should take extra measures to monitor liver function in addict patients, regardless of whether or not their drugs of choice were acetaminophen compounded prescription drugs.

Thank you subscribers. We appreciate your dedicated readership. At MEDTOX we are committed to providing clients with the service and solutions you need to run successful drug testing programs. Our Journal is just one way that we show that commitment.

Sincerely,

MEDTOX Journal

MEDTOX Scientific, Inc.