Pain Management in the Monitored Healthcare Professional

Annual NOAP Conference in New Orleans

Omni Royal Orleans Hotel, March 28, 2018 9:00 – 10:15 AM

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IPN Medical Director

IPN
Intervention Project for Nurses

Disclosure of Relevant Financial Relationships *

Name	Commercial Interests	Relevant Financial Relationships: What Was Received	Relevant Financial Relationships: For What Role
John C. Tanner, D.O., DABAM, DFASAM, CCFC, MRO	Indivior™	Honorarium	Consultant, Speaker and distant past research
	BDSI™	Honorarium	SUD Medication Consultant, Development of Slide Deck, Speaker Training, and Speaker
	kaléo™	Honorarium	Overdose Medication Consultant
	US WorldMeds™	Honorarium	Withdrawal Medication Consultant
	Alkermes™	Honorarium	Mental Health Medication Consultant

* RESOLUTION OF CONFLICTS:

In regard to this discussion the medications used to treat: mental health disorders, opioid use disorders, withdrawal, or overdose by these five companies either will not be or only be discussed regarding approved on-label use during this lecture or will be clearly identified as off-label.

Some medications with buprenorphine by 2 of the companies are not approved for pain and any discussion is off label.

John C. Tanner, DO, DFASAM, DABAM, CCFC, MRO

- Medical Director for the Intervention Project for Nurses (IPN) - Florida
- One of the 6 elected Directors at Large for the American Society of Addiction Medicine's Board of Directors for two consecutive terms (from 2011 to 2019)
- Distinguished Fellow of the American Society of Addiction Medicine (DFASAM)
- Serving on the Board of Directors for the Florida Society of Addiction Medicine since 2013
- Inaugural Diplomate of The American Board of Addiction Medicine (DABAM)
- Assistant Professor Department of Psychiatry – University of Florida College of Medicine (courtesy appointment)
- Private Addiction and Behavioral Medicine Practice since 1984
- One of the 3 Principle Investigators for the FDA Phase 2 and 3 Clinical Trials for approval of Suboxone® Film
- Certified Medical Review Officer (MRO) by the Medical Review Officer Certification Council
- Clinically Certified Forensic Counselor (CCFC) and Diplomate of The Board of Clinical Forensic Counseling
- Certificate of Added Qualifications in Addiction Medicine by the AOA Bureau of Osteopathic Specialists under the Conjoined Boards
- Diplomate of The American Academy of Pain Management

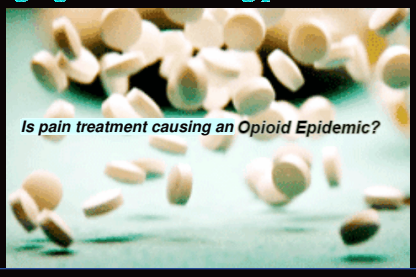
Continuing Education Activity Objectives

Title of Activity: Pain Management in the Monitored Healthcare Professional

Date: Wednesday, March 28, 2018 8:00 to 12:15 AM

OBJECTIVES	OUTLINE	TIME FRAME	PRESENTER	METHODS
Objective 1 Upon completion of this activity the learner will be able to discuss how a healthcare professionals with a chronic pain disorder may jeopardize the workplace and public safety, and identify signs that may be helpful in identifying medication related impairment.	A) How the impairment risks safety for public receiving healthcare. B) Medication risks for the healthcare professional them self. C)Issues 3, a lack of focus or concentration due to uncontrolled pain or medication related impairment) that jeopardizes patient care. D) Some of the physical signs of drug related impairment (pupils, skin, cognitive and behavioral, motor skills, etc.).	8 to 12 minutes	John C. Tanner, D.O., DFASAM, DABAM, CCFC, MRO	Lecture Discussion PowerPoint and Q&A
Objective 2 Upon completion of this activity the learner will be able to explain some of the basic neuroscience as it relates to chronic pain and how a substance use disorder or diversion may develop in someone with chronic pain.	A)Pain medication's influence on; motor skills, cognitive functioning, memory, motivation, impulse control, mood, and judgment. B) How drugs "hijack" systems in the brain progressing to addiction. C) Why behavioral changes occur that do not to be appear rational. D) The neuroscience as it relates to known available treatments.	8 to 12 minutes	John C. Tanner, D.O., DFASAM, DABAM, CCFC, MRO	Lecture Discussion PowerPoint and Q&A
Objective 3 Upon completion of this activity the learner will be able to better understand more effective strategies for monitoring and management in health professionals with chronic pain including the roles of a medical director and/or case manager, the MRO, specialized chronic pain and neurocognitive evaluators, and pain treatment providers.	A)Importance of establishing accurate pain and potential substance use disorder diagnoses thorough evaluation by an experienced chronic pain & substance use disorder evaluator who comprehends safety sensitive issues. Appropriate pain treatment is necessary. B) Use of medications may require neurocognitive testing to assure safety to practice while on some needed medications. C)An understanding of complicated metabolites from prescribed medication is needed to avoid problems and identify relapse.	8 to 12 minutes	John C. Tanner, D.O., DFASAM, DABAM, CCFC, MRO	Lecture Discussion PowerPoint and Q&A
Objective 4 Upon completion of this activity the learner will be able to understand some of the better pharmaceutical options for management or treatment of chronic pain a healthcare professional who may be at risk for, or already have a substance use disorder.	A)The role of various opioids and partial opioid agonists (such as buprenorphine or buprenorphine-naloxone medications). B) Muscle relaxants and potential for impairment. C)Noncontrolled and adjunctive medications (including medications for neuropathic pain, serotonin-norepinephrine reuptake inhibitors, NSAIDs and a variety of other potentially therapeutic medications).	8 to 12 minutes	John C. Tanner, D.O., DFASAM, DABAM, CCFC, MRO	Lecture Discussion PowerPoint and Q&A

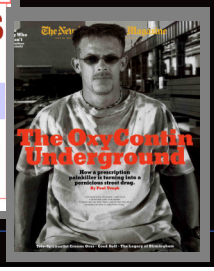
Managing and monitoring pain in the HCP



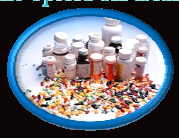
Opioid analgesics are one of the most prescribed psychoactive drugs in western societies

Making us a "High" (or low) Society

As we treat pain with opiates, opioid use disorder becomes a growing problem so OUD risk assessments & reassessments are critical.



How can we prevent the opioid Rx from becoming a "Beast in a Bottle"?



Why should there be monitoring for a healthcare professional with a chronic pain diagnosis?

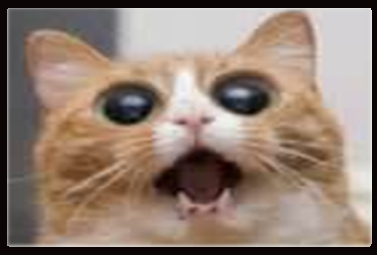
- Not every healthcare professional with a chronic pain diagnosis on scheduled medication needs to be monitored.
- If there are concerns raised about any impairment or problematic behavior, then safety issues for the public receiving healthcare should be considered.
- There are also safety issues for the healthcare professional themself.

SAFETY ISSUES INVOLVED

Controlled medication (opioids & select muscle relaxers) may impact on patient care:

- Jeopardize the therapeutic work environment
- Medication errors
- Procedure mistakes
- Other types of negative patient outcomes

Pain → Irritability and Aggression



Disruptive behaviors associated with SUD

Behavioral changes can be a sign of: impairment or withdrawal from opioids and/or sedatives or from unrelenting severe persistent pain.

Personality or emotional changes

- Emotional labiality. Healthcare professional becomes unusually quiet or irritable or has frequent mood swings due to pain or medications.
- Inappropriate emotional responses such as snapping at colleagues, uncontrolled anger, or frequent crying.
- Diminished alertness (perhaps appearing dazed or preoccupied), confusion, or frequent memory lapses (resulting from medication effects).

The beast is alive, I want my pain medicine!

Personality or emotional changes

- Most significant pain disorders may transiently or episodically have a significant negative impact on emotions and behavior.
- Based on neuroscience; severe pain can trigger intense emotions that increase limbic activity and decrease cognitive activity; thereby adversely impacting concentration, focus, judgment and even impulse control.
- Negative effects on these areas of important functioning can potentially jeopardize public safety.

SAFETY ISSUES INVOLVED

Impairment of fine or gross motor skills (sometimes linked to the pain disorder, pain medication or associated behavioral issues).

Sometimes that beast sadly becomes deadly before it is recognized

Spring Hill nurse found dead in car

By CHUCK MURPHY
Times Staff Writer

NEW PORT RICHEY — A nurse from Spring Hill was found dead Thursday morning in her car, which was parked in front of a New Port Richey convenience store. Detectives don't know how she died but do not suspect she was murdered.

General pain or medication issues

- Monitoring of pain treated with scheduled drugs is more complex than monitoring of substance use disorders alone.
- This may be the reason why many monitoring programs do not address chronic pain issues, even though treating pain disorders with controlled substances can pose risks of impairment or behaviors that jeopardize public safety.

Common Chronic Pain Disorders we see

List of some the common specific pain disorders monitored.

- Recurrent frequent migraine or a variety of other headache disorders
- Low back pain and neck pain
- Neuropathic pain (i.e. as a result of diabetes mellitus, nerve pathology, or nerve irritation)
- Fibromyalgia
- Arthritis or a variety of rheumatologic disorders
- Sciatica
- Chronic dental pain
- Chronic abdominal or pelvic / urinary tract pain syndromes

GENERAL ISSUES

- Must always be mindful that the monitoring program does not diagnose and does not treat; but should be aware of diagnostic criteria and appropriate treatments.
- Evaluators provide an IME or forensic evaluation and therefore should not be a treatment provider for the participant they are evaluating.
- Careful distinctions need to be made so the boundaries not crossed.
- There are benefits to using program vetted and approved evaluators and treatment providers. Finding good physicians certified both in chronic pain and addiction can make this challenging.
- Monitoring program oversight and feedback may be provided to evaluators during trainings.
- Significant monitoring program research is needed in this area of medicine to more clearly define best practices and assure public safety.

IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

What is the etiology of the pain disorder, are appropriate treatments and medications being utilized and non-scheduled options tried?

Requires an accurate baseline chronic pain (and any SUD or mental health diagnosis) by a well qualified evaluator, followed by appropriate therapeutic treatments and appropriate medication implementation.

Finding physicians certified in both Addiction Medicine and Pain Management may be a challenge in some areas

DSM-IV Criteria for Pain Disorder Associated With Psychological Factors [1]

A) Pain in one or more anatomical sites is the predominant focus of the clinical presentation and is of sufficient severity to warrant clinical intervention.

B) The pain causes clinically severe distress or impairment in social, occupational, or other important areas of functioning.

C) Psychological factors are judged to have an important role in the onset, severity, exacerbation or maintenance of the pain.

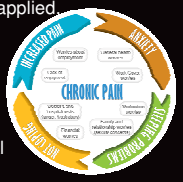
D) The symptom or deficit is not intentionally produced or feigned (as in Factitious Disorder or Malingering).

E) The pain is not better accounted for by a Mood, Anxiety or Psychotic Disorder and does not meet criteria for Dyspareunia.

1. DSM-IV - American Psychiatric Association

DSM-IV: Pain Disorder Associated With Psychological Factors and General Medical Condition [1]

- If an underlying medical condition has been established then there are specific qualifier codes that can be applied.
- These conditions are categorized under somatoform disorders.
- DSM-5 categorizes more generally (not specific to pain) under Psychological Factors Affecting other Medical Conditions



1. DSM-IV & DSM-5 - American Psychiatric Association

DSM-5 Criteria for opioid use disorder

1) Opioids are taken in larger amounts or over a longer period of time than was intended.
2) Persistent desire or unsuccessful efforts to cut down or control opioid use.
3) A great deal of time is spent in activities necessary to obtain, use or recover from opioid effects.
4) Craving, or strong desire or urge to use opioids.
5) Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school or home.
6) Continued use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the opioid.
7) Important social, occupational, or recreational activities are given up or reduced because of opioid use.
8) Recurrent opioid use in situations in which it is physically hazardous.
9) Continued opioid use despite knowledge of having persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
10) Tolerance, as defined by either of the following (the following are excluded if the opioids are solely used under appropriate medical supervision):
    a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect.
    b. A markedly diminished effect with continued use of the same amount of an opioid.
11) Withdrawal as manifested by either of the following (the following are excluded if the opioids are solely used under appropriate medical supervision):
    a. the characteristic opioid withdrawal syndrome
    b. opioids are taken to relieve or avoid withdrawal symptoms

Should specify severity (mild, moderate, or severe) and should specify if in early remission, sustained remission.
Should specify if on maintenance therapy and if in a controlled environment.

IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

Contract development/formulation and monitoring issues should be based on establishing an accurate diagnosis.

- Consider duration of monitoring depending on the diagnoses and severity (i.e. Does a co-occurring chronic pain and SUD or chronic pain and mental health problem exist?).
- Is there a potential chronic pain cure in the participant's future, i.e. a surgical intervention or procedure to remove or greatly reduce the source of pain?

IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

What types of evaluation can be done?

- Chronic pain evaluation, preferably by a board certified pain management and addiction medicine physician
- Fitness for duty/safety to return to work
- Psychiatric/mental health/psychological evaluation
- Licensing board or health department compelled evaluation
- Second opinion evaluation
- Neurocognitive evaluation
- Multi-day comprehensive inpatient or outpatient evaluation

IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

What are the tools used to establish an accurate diagnosis?

A Diagnostic Monitoring Contract is useful when there is not sufficient information to establish a clear diagnosis; however there is significant concern based on historical issues and safety concerns to the point that there needs to be monitoring to assure that a significant impairing problem does not exist and to protect public safety.

IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

What are the tools used to establish an accurate diagnosis?

- So-called "Diagnostic Monitoring Contract" or monitoring for a briefer period of time may be indicated to assure that during that time, an underlying impairing pain or substance use disorder diagnosis does not manifest.
- Some pain disorders do not have consistent manifestations and only present with the pain or related problem behaviors on an episodic basis.
- A one or two year "tincture of time" period of monitoring will almost always allow sufficient time for identification or rule out that a problem does or does not exist.
- Our diagnostic contract is a 2-year contract with provision for early completion after 1 year of full compliance.

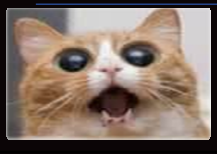
IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

Scrutiny of the medications being used and appropriate medication management:

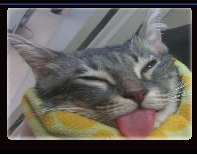
- Scheduled medications may need neurocognitive or psychiatric evaluation prior to approval.
- Medications that are excessively sedating or cause daytime somnolence may need to be switched to alternatives with less potential for impairment.

So what may be wrong with using opioids & benzodiazepines/sedatives to treat pain?

In withdrawal?



Under the influence?



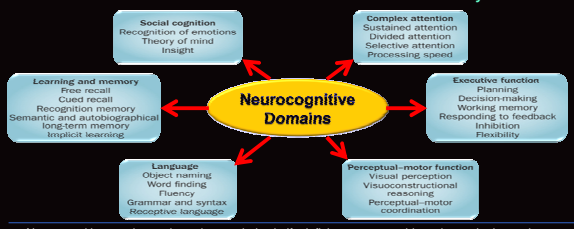
The effects of benzodiazepines on cognition

- Meta-analyses of peer-reviewed studies conducted found that cognitive dysfunction did in fact occur in patients treated long term with benzodiazepines.
- Although cognitive dysfunction improved after benzodiazepines were withdrawn, patients did not return to levels of functioning that matched benzodiazepine-free controls.
- Neuroimaging studies have found transient changes in the brain after benzodiazepine administration but no brain abnormalities in patients treated long term with benzodiazepines.
- Findings suggest that patients should be advised of potential cognitive effects when treated long term with benzodiazepines, although they should also be informed that the impact of such effects may be insignificant in the daily functioning of most patients.

J Clin Psychiatry. 2005;66 Suppl 2:9-13

IMPORTANCE OF STARTING WITH AN ACCURATE DIAGNOSIS, PROVIDING PROPER TREATMENT AND DECIDING IF IT SHOULD BE MONITORED

What are the tools used to establish medication safety?



Neurocognitive psychometric testing can help clarify deficient areas to address in monitoring or therapy

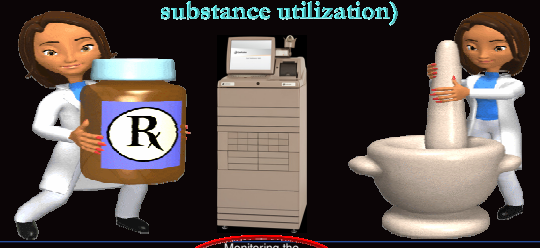
Small sample of types of psychological or neurocognitive psychometric testing available:

- Wechsler Test of Adult reading (WTAR)
- Wechsler Adult Intelligence Scale - Fourth Edition (WAIS-VI)
- Wechsler Memory Scale (WMS-IV)
- California Verbal Leaning Test (CVLT)
- Controlled Oral Word Association Test (COWAT)
- Rey-Osterrieth Complex Figure (RCFT)
- Judgment of Line Orientation (JLO)
- Grooved Pegboard
- Boston Naming Test
- Category Fluency Test
- Test of Memory Malingering (TOMM)
- Wechsler Memory Scale (Logical Memory and Visual Reproduction)
- Wisconsin Card Sorting Test (WCST)
- Stroop Interference Procedure
- Trail Making Test-A and B
- Conners Continuous Performance Test (Conners CPT™)
- Advanced Clinical System Test of Premorbid Functioning
- Delis-Kaplin Executive Functioning System- Selected Subtests
- MAE Token Test
- Beery Developmental Test of Visual Perception
- Beery Developmental Test of Motor Coordination
- Frontal Assessment Battery
- Minnesota Multiphasic Personality Inventory-2 (MMPI-2)
- Million Clinical Multiaxial Inventory-III (MCMI-III)

Importance of starting with accurate pain or co-occurring SUD diagnoses, completing appropriate treatment, then monitoring for the important issues

What are the issues that should be monitored and why should they be monitored?

While Working, Pharmacist's Nontraditional Role (now looking for aberrant patterns with controlled substance utilization)



Distributing medications | Monitoring the dispensing system | Compounding medications

Signs of possible medication diversion

- Consistently coming to work early and staying late.
- Volunteering to work with patients who receive regular or large amounts of pain medication.

As a substance use disorder develops or if serious chronic pain is not adequately treated, suicide risk may increase (monitor for this).

suicide is a permanent solution to a temporary problem

www.zazzle.com

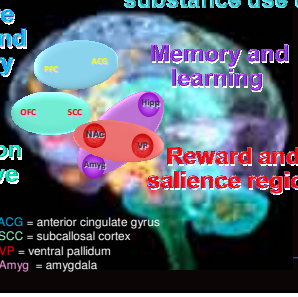
Brain circuits involved in survival and substance use disorders

Executive function and inhibitory control

Memory and learning

Motivation and drive

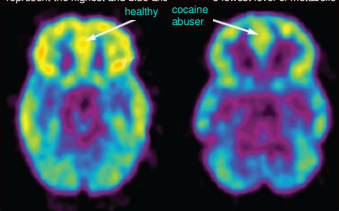
Reward and salience region



1) PFC = prefrontal cortex
2) ACG = anterior cingulate gyrus
3) OFC = orbitofrontal cortex
4) SCC = subcallosal cortex
5) NAc = nucleus accumbens
6) VP = ventral pallidum
7) Hipp = hippocampus
8) Amyg = amygdala

PET: Substance abusers have reduced metabolism, especially in the orbitofrontal cortex[1]

Comparison of a healthy subject (left) and a cocaine abuser (right), red and yellow represent the highest and blue and purple the lowest level of metabolic activity.



1. Volkow ND, Fowler JS, Wang GJ, Hitzemann R, Logan J, Schlyer DJ, Dewey SL, Wolf AP Synapse. 1993 Jun; 14(2):169-77.

What is the goal addiction treatment? Recovery? Recovery must be defined before the goal becomes clear

Emotional Sobriety?

Remission?

Rehabilitation?

Recovery

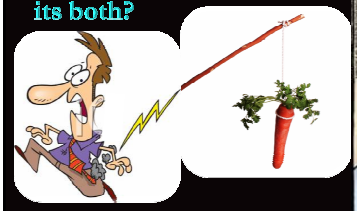
Sobriety?

Personal Health?

Abstinence?

Perhaps recovery is: the process of being motivated to seek new healthy rewards, having learned better ways to cope with life's stressors, and having the capacity to regain control over cravings and impulses (all 8 cylinders).

Is a stick/bolt or a carrot more effective? Maybe its both?

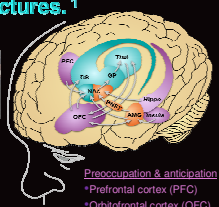


What drives the addiction process? 3 sets of brain structures. [1]

Is it a carrot on a stick?

Euphoria & Reward

- Nucleus (anterior) accumbens (NAc)
- Dorsal striatum (DS)
- Globus pallidum (GP)
- Thalamus (Thal)
- Ventral pallidum (VP)



Preoccupation & anticipation

- Prefrontal cortex (PFC)
- Orbitofrontal cortex (OFC)
- Hippocampus (Hippo)
- Insula (Insula)

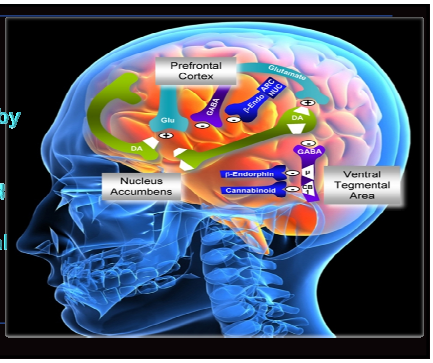
Is it a whip from behind?

Withdrawal and Negative Affect

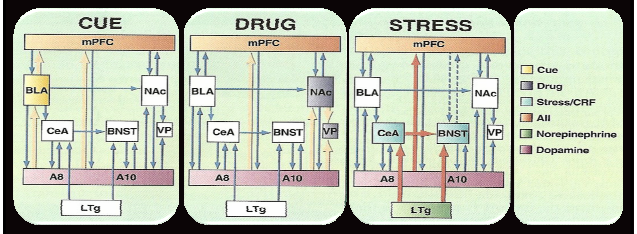
- Central amygdala (AMG)
- Bed nucleus of the stria terminalis (BNST)
- Nucleus (posterior) accumbens (NA_c)

1. Koob GF, Volkow ND. *Neuropsychopharmacology*. 2010;35(1):217-238.

Neurocircuitry and brain chemicals are influenced by drugs in ways that alter brain functioning and may impair the person's mental and physical functioning.



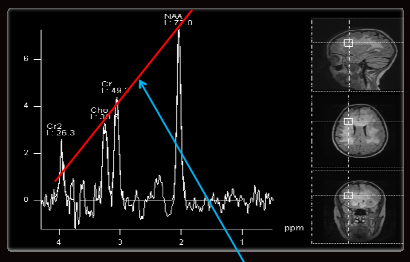
What are the known underlying mechanisms of relapse?[1]



Reference:
1. Shaham *et al., 2003*

Chemical – MR Spectroscopy (MRS)

- Safe (No X-Rays)
- Noninvasive
- Provides a snapshot of the neurochemistry within a defined volume of interest
- Significantly increases the accuracy and specificity of conventional MR imaging in differentiating between disease states



Hunters Angle

Some of the metabolites seen on MRS[1]

ppm	Metabolite	Properties
0.9-1.4	Lipids	Products of brain cell destruction
1.3	Lactate	Product of anaerobic glycolysis
2.0	N-acetylaspartate (NAA)	Neuron cell marker
2.2-2.4	Glutamine (Glx)/GABA	Neurotransmitters
3.0	Creatine (Cr)	Energy metabolism
3.2	Choline (Cho)	Cell membrane marker
3.6	myo-Inositol (mI)	Glial cell marker, osmolyte, hormone receptor mechanisms
1.48	Alanine	Present in meningiomas

1. Ann N Y Acad Sci. 2010 February; 1187: 148–171.
doi: 10.1111/j.1749-6632.2009.05143.x

Magnetic Resonance Spectroscopic Imaging and Relevance to Opiates[1]

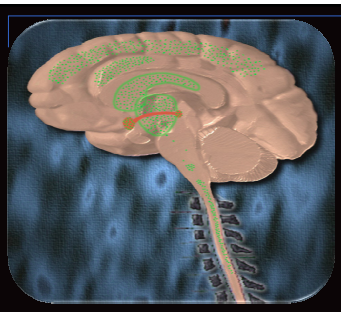
Summary of reported neurotransmitter changes with drugs of abuse

	Glutamate	GABA
Methamphetamine	Decrease in frontal gray matter (Ernst & Chang, 2008)	———
Cocaine	———	Decrease in prefrontal cortex (Xia et al., 2011) Decrease in DCC (Harrington et al., 2005)
Opiates	Decrease in ACC (Yuan et al. 2007)	———
Cannabis	Decrease in basal ganglia (Chang et al., 2005)	———
Alcohol	Increase in ACC (Lee et al., 2007) Decrease in BG (Meyerhoff et al., 2006)	Decrease in DCC (Behar et al., 1999)
Nicotine	No change in HP (Gallinat et al., 2006)	Decrease in OCC (Epperson et al., 2005)

1. Ann N Y Acad Sci. 2010 February; 1187: 148–171.
doi: 10.1111/j.1749-6632.2009.05143.x

Summary of MRS Drugs of Abuse Findings

- Reductions in NAA and elevations in mI were observed almost universally indicating that drugs of abuse in general have a profound impact on neuronal health, energy metabolism and inflammatory processes.
- The next most common metabolite changes involved alterations in Cho and Cr, suggesting that methamphetamine, cocaine, cannabis, and alcohol negatively influence cell membrane turnover as well as energy maintenance.
- Methamphetamine, opiates, cannabis, and alcohol were found to alter Glx to some extent, while GABA was reduced by cocaine, alcohol and nicotine, together suggesting that drugs of abuse adversely impact neurotransmission.



Opiate binding sites within broad areas of the brain & spinal cord (possible target sights where medications like buprenorphine or naltrexone may reduce relapse risk).

Each drug has a different set of receptors, pathways and neurochemicals that reward and drive addiction behaviors

Impact of opiates on the brain

Homeostatic mechanisms with longer term use of opiates results in:

- Decrease dopamine receptors
- Decrease GABA
- Increase corticotropin releasing factors
- Increase glutamate
- Increased production of norepinephrine
- Decrease serotonin
- Decrease endorphin peptides
- Increased catecholamine hormones

End results are
- Increased symptoms of depression
- Increased anxiety
- Increased brain and body stress
- Increased pain

Weekly Facilitated Support Groups
The most transforming part of monitoring

Weekly Facilitated Support Groups with Quarterly Reports

- Consideration should be given to establishing virtual on-line groups if availability is a problem

Possible component of monitoring, Chronic Pain Support Groups

- ACPA groups welcome anyone who is living with an ongoing pain problem.
- The goal of an ACPA group is to provide support, validation, and education in basic pain management and life skills.
- Groups are facilitated by the group members themselves and the success of the group is a shared responsibility.
- ACPA groups do not focus on symptoms or provide treatment of any kind. Rather they are a means for people to share what they have learned and to encourage others to create more satisfying lives.
- Select a state to see if there is a group located near you: For contact information on the group you are interested in, call 800-533-3231 or email ACPA@theacpa.org.

Possible component of monitoring: on-line Chronic Pain Support Group if live groups not available

- www.dailystrength.org/group/chronic-pain

Component of monitoring for those with co-occurring SUDs: mutual support groups[1]

1. Alcoholics Anonymous (aa.org), Narcotics Anonymous, Women for Sobriety (womenforsobriety.org), Abstinence based SMART Recovery(smartrecovery.org), Secular Organizations for Sobriety (secularsobriety.org), faith based support group like Celebrate Recovery

MONITORING TOOLS AVAILABLE

- Pain medication management with a Board Certified Pain management physician with quarterly reports.
- Infrequently, therapeutic drug level testing intermittently may be indicated in select cases, especially when there is a history of medication noncompliance (i.e. atypical medication blood level tests every 3 to 6 months).

What the tester looks like

Opioid Metabolites: Liquid or gas chromatography – mass spectrometry analysis (LC/MS or GC/MS) will demonstrate:

Hydrocodone (a schedule III opioid) Examples: Norco®, Vicodin®, and Lortab® are all (hydrocodone in combination with acetaminophen)
•Hydrocodone is metabolized to; hydromorphone, norhydrocodone, and dihydrocodine (all primary metabolites). Other minor metabolites include; isodihydrocodeine, dihydromorphone and isodihydromorphone.
•Codeine, morphine, oxycodone, norcodeine, oxymorphone, and normorphine are not metabolites that would appear after use of hydrocodone.

Oxycodone (a schedule III opioid) Examples: Percocet® (oxycodone in combination with acetaminophen); OxyContin®, Tylox® (oxycodone in combination with acetaminophen); and Roxicodone.
• Oxycodone is metabolized to; noroxycodone and oxymorphone.

Fentanyl (a schedule II/I opioid) Examples: Duragesic®, Fentora®, and Actiq®.
•Fentanyl is metabolized to norfentanyl.

Heroin (an illicit schedule I/I opioid)
• Heroin is metabolized to 6 mono acetylmorphine (6-MAM), morphine and hydromorphone.

Morphine (a schedule II/I opioid) Examples: Kadian® and Avinza®
•Morphine is metabolized to hydromorphone (same as Dilaudid®). Morphine is a metabolite of codeine and sometimes heroin.
•Morphine is a metabolite of codeine.

Oxymorphone (a schedule II/I opioid) Example: Opana®
•Oxymorphone is a metabolite of oxycodone.

Hydromorphone (a schedule II/I opioid) Example: Dilaudid®
•Hydromorphone is a metabolite of hydrocodone.

Methadone (a schedule II/I opioid) Example: Dolophine®
•Methadone is metabolized to EDDP.

Buprenorphine (a schedule II/III opioid) Examples: Suboxone Film®, Bunavail®, Zubsolv®.
•Buprenorphine is metabolized to norbuprenorphine.

Codeine (a schedule II/V opioid)
•Codeine is metabolized to; morphine, hydrocodone, hydromorphone, norhydrocodone, and dihydrocodine

Are additional laboratory tests needed?

Hair, nail, and blood toxicology tests

HAIR AND NAIL TESTING[1]

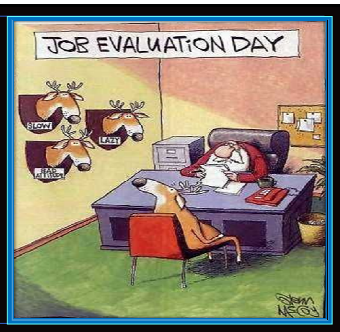
- Hair grows on average ½ inch per month, but there is a lot of variation.
- Still some issues with hair including dying, bleaching, permanent straightening/waving may negatively impact the results. [1]
- Dark hair binds drugs tighter.
- Fingernails grow about 3 mm/month. Fingernail clippings can show drugs up to 8 months.

1. Morini et al. 2010

Other chronic pain monitoring tools
Quarterly therapy reports

Outpatient treatment with a master's level trained therapist or psychologist and/or a psychiatrist to help coping skills to deal with the pain most appropriately.

Employer quarterly workplace reports.



MONITORING TOOLS AVAILABLE

Implementation of limitations or restrictions of the workplace environment

- Reasonable employer accommodations to limit pain or reduce risk of triggering a flair (i.e. lifting limits, sitting/standing durations, special chairs etc.).
- Slower paced, reduced patient load or work demands.

MONITORING TOOLS AVAILABLE

Implementation of limitations or restrictions of the workplace environment

- This may entail reviewing a job description in detail and avoiding high paced or higher stress settings such as a critical care unit or emergency room or limitation to low acuity work.
- Much of this may be decided on the basis of neurocognitive testing results.

MONITORING TOOLS AVAILABLE

Implementation of limitations or restrictions of the workplace environment

- Must clearly define safety sensitive and healthcare issues (i.e. case management where there is no direct patient contact, but in our program is still considered safety sensitive because it ultimately impacts on the care that a patient receives).
- An example of a non-safety sensitive position might be retrospective chart review for quality assurance, medical malpractice or for research.

So what is the miracle pain medication?

Non-DEA scheduled options to treat pain

Nonpharmacologic options

- A variety of physical therapy and physical rehabilitation modalities.
- Trigger point, facet, intra-articular injections, etc.
- Other interventional methodologies such as neurostimulators.
- Outpatient psychotherapy.

Pharmacologic options

- Adjuvant analgesics (topical analgesics, steroids, acetaminophen, nonsteroidal anti-inflammatories, tricyclic antidepressants, serotonin norepinephrine reuptake inhibitors, and neuroleptic agents)

Are Scheduled Medications Appropriate?

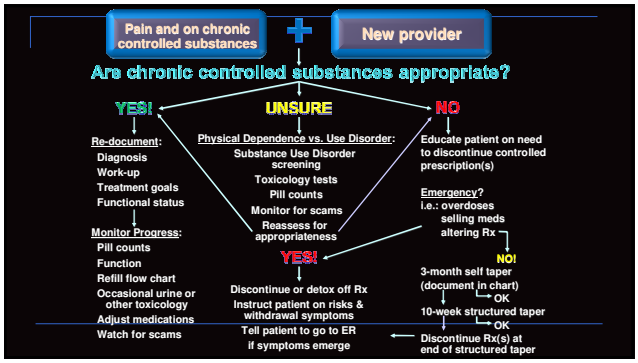
"Ask your doctor if another damn pill is right for you!"

Issues of acceptance of medication assisted treatment by 12-step (i.e. Alcoholics Anonymous) support groups[1]

- Many people in recovery mistakenly believe that Alcoholics Anonymous is anti-medication
- *Alcoholics Anonymous is not anti-medication*
- Their booklet *actually supports* appropriate use of medications for mental health problems
- Alcoholics Anonymous General Service Office in New York has revised the booklet with a new 2011 version (updated from 1984 version).
- May be ordered at PO Box 459, Grand Central Station NY, NY 10163 and a PDF version is also available on-line

My advice is that patients should find a sponsor who is supportive of their medication assisted recovery and not everyone at 12-step meetings needs to know

Reference
1. Alcoholics Anonymous World Service, Inc.. The AA Member - Medications & Other Drugs©. 1984, 2011.



Desirable patient characteristics:

- No substance use disorder(s)
- Reliable
- History of good medical compliance
- Willing to do their part to recover
- Recognizes that prescription(s) is/are only a part of the solution
- Good support (no substance abusers in the home)

Indications for controlled substance therapy for chronic pain

- Is there a ***clear appropriate diagnosis***?
- Is there ***documentation*** of an adequate work-up?
- Is the patient experiencing ***impairment of function (from disease state or from the prescribed medication)***?
- Have non-controlled multimodal therapies ***failed***?
- Have ***contraindications*** been ruled out?
- Is there an ***exit strategy***?
- Has a ***controlled substance agreement*** been agreed upon and signed?

Begin or maintain controlled substance therapy, then:

Document

Monitor

Avoid poly-pharmacy problems

Utilize REMS

Establishing functional goals & monitoring by evidence[1]

Functional goal	Evidence
•Begin physical therapy	•Letter from physical therapist
•Sleeping in bed as opposed to lounge chair	•Report by family member or friend in writing or in person
•Participation in pain support group	•Letter from group leader
•Increased activities of daily living	•Report by family member or friend
•Walk around the block	•Pedometer record or written log of activity
•Increased social activities	•Report by family member or friend
•Resumed sexual relations	•Report by partner
•Returned to work	•Pay stubs from employer or letter
•Daily exercise	•Gym attendance records or report from family member or friend

1. Adapted from "Responsible Opioid Prescribing a physician's guide" by Scott M Fishman M.D. 2007, pg. 55

Neurontin® (gabapentin) or Lyrica® (pregabalin) for pain[1]

- A recent review has identified these two drugs (gabapentin and pregabalin) as having some potential for abuse, especially in individuals with a history of opiate use disorder and psychiatric comorbidities[1].
- If a HCP has a clear history of diversion or abuse of one of these than more likely than not, they should not be approved for use to control pain or for other on or off label indications.

1. Evoy KE, Morrison MD, Saklad SR. Abuse and misuse of pregabalin and gabapentin. Drugs 2017; 77:403-426

Mayo Clinic Proceedings Article Re: Buprenorphine[1]

- Opioid-Abusing Health Care Professionals: Options for Treatment and Returning to Work After Treatment
- Report published in the March issue of the Mayo Clinic Proceedings recommended that healthcare professionals taking buprenorphine for opiate addiction problems should not return to work. (March 1, 2012 | Seppala, Marvin D; Oreskovich, Michael R)
- Hamza H; Bryson EO. Buprenorphine maintenance therapy in opioid-addicted health care professionals returning to clinical practice: A hidden controversy. Mayo Clinic Proceedings 87(3): 260-267, 2012. (26 refs.)
- It remains controversial whether it is safe for recovering health care professionals to return to clinical practice after treatment for drug addiction.
- One specific component of reentry that remains particularly contentious is the use of pharmacotherapeutics, specifically buprenorphine, as opioid substitution therapy for health care professionals who wish to return to clinical work.
- Because health care professionals are typically engaged in safety-sensitive work with considerable consequences when errors occur, abstinence-based recovery should be recommended until studies demonstrate that it is safe to allow this population to practice while undergoing opioid substitution therapy.
- Controversial article about the use of buprenorphine maintenance treatment in opioid-dependent health care professionals
- Dr. John A. Renner, chair of the American Psychiatric Association council on Addiction Psychiatry, called the article biased, saying that it is likely that a majority of physicians specializing in addiction therapy do not hold the same opinion.

1. Mayo Clin Proc. 2012 March; Hamza H., Bryson E.O. et, al. 87(3): 260–267. doi: 10.1016/j.mayocp.2012.02.002

Issues regarding the Mayo Clinic Proceedings Article

- John A. Renner Jr, MD, chair of the American Psychiatric Association (APA) Council on Addiction Psychiatry, cautioned that "the article is biased, and its conclusions are not relevant for the majority of physicians in recovery."
- "It is unlikely that these opinions are shared by the majority of physicians who specialize in the pharmacotherapy of addictions," Dr. Renner told Medscape Medical News.
- Designed to rehabilitate opioid-addicted HCPs and return them to clinical practice, PHPs have been created by most state medical boards. Requirements for these programs vary but typically include monitoring for a period of at least 5 years as a way for the physician to keep his or her license.
- Hamza and Dr. Bryson asked the 51 PHPs in the United States about their policy regarding HCPs returning to the workplace while on buprenorphine treatment.
- "Fully 25 remained unavailable for comment despite our multiple attempts to contact them," they report. Spokespersons for 2 programs said they were unwilling to discuss this issue, and 1 program director reported feeling "uncomfortable" revealing the state's practice. The nursing programs were "a little more cooperative," the authors report, although 16 of 51 programs still remained unavailable for comment on this issue.

Issues regarding the Mayo Clinic Proceedings Article

- In an interview with Medscape Medical News, Dr. Bryson said he "fully expected that these programs would freely share this information. I guess I didn't realize that it is such a controversial issue," he said.
- Dr. Bryson said, "Initially,the goal of this project was to look at what evidence there is to support the use of buprenorphine in [HCPs] returning to work. The question originally arose from one of my colleagues asking whether or not this was allowed, and I didn't know the answer. I was surprised to find out that there is no US national policy, and the individual policies that are set by the states are not the same — there are a wide range of practices."
- Most medical societies do not have a specific policy on this issue. An exception is the American Association of Nurse Anesthetists (AANA), which does have clear, specific recommendations for nurse anesthetists with parenteral opioid dependence, Drs. Seppala and Oreskovich point out.
- "The AANA recommends a minimum of 1 year away from the clinical anesthesia arena after a diagnosis of intravenous drug addiction or major opioid use. Unfortunately, such recommendations do not exist for other medical specialties or personnel."
- Drs. Seppala and Oreskovich say they agree that "caution is needed" in decisions associated with the use of buprenorphine maintenance among HCPs returning to the healthcare workplace. "The foundation information required to make good decisions regarding this medication in this population working in safety-sensitive positions is lacking," they conclude.

Issues regarding the Mayo Clinic Proceedings Article

- Dr. Bryson said buprenorphine maintenance therapy "does have a role in certain circumstances, but in the population of healthcare professionals...it's not worth the risk until we actually determine that it is safe," he said.
- He added that there is evidence in the literature that PHPs that use an abstinence-based model for physicians in recovery have "success rates in excess of other programs."
- In 1 recent study, only 22% of physicians tested positive for drugs of abuse at any time during their 5-year monitoring period, and 71% remained licensed and employed 5 years after their initial treatment (DuPont et al, J Subst Abuse Treat, 2009;37:1-7).

A dose-effect study of repeated administration of buprenorphine-naloxone on performance in opioid-dependent volunteers[1]

- Source: Department of Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, Baltimore, MD 21224, USA. mmintzer@jhmi.edu
- Based on its unique pharmacological profile, buprenorphine may produce less impairment in psychomotor and cognitive performance than methadone.
- Few studies that have investigated the performance effects of buprenorphine in opioid-abusing volunteers examined effects of single acute doses rather than effects of repeated dosing and included a very limited range of measures.
- Study evaluated dose-related effects of repeated administration of the buprenorphine/naloxone combination product (8/2, 16/4, 32/8 mg, sublingual tablets) in eight opioid-dependent volunteers on performance of a broad range of tasks, following a period of 7-10 days of dosing at each level, in a double-blind, within-subject, crossover design.
- Testing battery included measures of psychomotor speed, time perception, conceptual flexibility, focused attention, working memory, long-term/episodic memory, and metamemory. Supporting the hypothesis of limited impairment with buprenorphine, results revealed minimal impairment in performance as buprenorphine-naloxone dose was increased four-fold.
- The only significant effect of dose was an impairment in episodic/long-term memory (recognition memory) performance at the highest dose (32/8 mg) relative to the two lower doses.
- Future studies incorporating larger sample sizes and non-drug controls, as well as directly comparing buprenorphine to methadone and LAAM are needed to further test the hypothesis of limited impairment with buprenorphine.

1. Drug Alcohol Depend. 2004 May 10;74(2):205-9.

Summary of pain monitoring tools

Workplace restrictions

Self reports i.e. mutual support groups

Evaluations (Chronic Pain, Psychiatric, Neurocognitive and/or Medical)

Quarterly workplace supervisor reports

Reports of drug levels

Verification of long-acting medication administration

Quarterly psychotherapist reports

Quarterly facilitated mental health support group reports

Quarterly prescribing physician pain medication management reports

IPN

Intervention Project for Nurses

Thank you for listening

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Questions