Annotated Bibliography

Allen, G., et. Al. (2003). *Cognitive and Motor Function After Administration of Hydrocodone Bitartrate Plus Ibuprofen, Ibuprofen Alone, or Placebo in Health Subjects with Exercise-Induced Muscle Damage.* Psychopharmacology. 166(3) p. 228-233. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/12552363

Study to look at effects of opiates; side effects that may be included in opiate use are sedation and impaired cognitive and motor performance. Subjects using hydrocodone bitartrate plus ibuprofen performed significantly less well on tracking tasks and made significantly more errors on simple reaction-time tasks then other groups in the study. The deficit was found to be highly transitory and not related to confusion or fatigue. In conclusion, hydrocodone was not associated with deterioration in complex cognition but was related to very transitory decrements in tasks involved simple hand-eye coordination.

American Association of Nurse Anesthetists. (2016). *Addressing Substance Use Disorder for Anesthesia Professionals. Position Statement and Policy Consideration.* Retrieved from https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/addressing-substance-use-disorder-for-anesthesia-professionals.pdf?sfvrsn=ff0049b1_2

Because anesthesia professionals are engaged in safety-sensitive work with considerable consequences when errors occur, abstinence-based recovery and refraining from substitute treatments such as buprenorphine are recommended. (*Used the reference when discussing this from the Hamza article listed below).

The most desirable inpatient rehabilitation treatment program has experience treating healthcare professionals, specifically anesthesia professionals. Completion of a minimum of 28 days inpatient treatment with at least 90 days of treatment total (inpatient or outpatient) offers the highest success rate. An ideal treatment center for anesthesia professionals includes:

- Approval by the state board of nursing
- A comprehensive evaluation and treatment recommendations by an American Society of Addiction Medicine (ASAM) member certified by the American Board of Addiction Medicine (ABAM) who is committed to evaluating and treating anesthesia professionals in abstinence based recovery models in accordance with other safety sensitive occupations such as aviation, department of defense and department of transportation
- Evaluation by an American Academy of Addiction Psychiatry (AAAP) board-certified addiction psychiatrist where appropriate
- Appropriate neuropsychiatric and or psychometric testing
- Medically supervised detoxification, when clinically indicated
- Treatment for mental health comorbidities
- Emphasis on a long-term 12-step model of abstinence-based recovery
- Evaluation of suitability for, and timing, of the return to anesthesia practice

Readiness for reentry to work is a collaborative decision of the monitoring program, a certified drug and alcohol counselor, and the employer. A minimum of one year in recovery before returning to the clinical anesthesia arena is recommended. The following criteria should be met prior to considering re-entering practice:

- Evaluation by a licensed provider with experience treating substance abuse and dependency
- Successful completion of a rehabilitation program
- Acceptance of the chronic nature of substance use disorder
- Evidence of a supportive spouse, significant other, or other supportive individuals
- Willingness to take Naltrexone, if appropriate, under direction and supervision of medical professional
- Having no untreated psychological comorbidities
- Participation in a monitoring program with random drug testing.
    - Recovery is improved when random drug testing occurs because of the consequences of a positive test.
- Five-year duration of monitoring with the potential of monitoring for the duration of clinical practice
- Having supportive colleagues, especially administrators and supervisors, at worksite familiar with history and needs
- Grounding in a recovery community, such as Anesthetists In Recovery
- Participating in a 12-step program

American Society of Addiction Medicine. *Public Policy on the Evaluation, Treatment, and Continuing Care of Addiction in Healthcare and other Licensed Professionals with Addictive Illness.* (2011). Retrieved on July 16, 2018.

- Professionals who have an "addictive illness or another potentially impairing health condition" should have reassurance that such professionals have been appropriately evaluated, adequately treated, and have received or are receiving state of the art continuing care and monitoring.
- This ensures the individual is in sustained remission AND to quickly detect a relapse before on-the-job "impairment" occurs.
- Experience has shown it difficult for a healthcare provider to become the patient—the "recipient of care." When the issue of addictive illness, fear of professional sanction, loss of career and reputation, and the stigma of addictive illness may be compounded; making evaluation, treatment, and continuing care more challenging. Also, they spend their career "being in charge and in control," creating greater difficulty adapting to the demands of monitoring and accountability required of recovery professionals.
- The PHP model of accountability, monitoring, and earned advocacy involving contingency management…"
- "When healthcare and other licensed professionals attain and maintain a state of disease remission; the ill professional, family, community, profession, and the public all benefit." P2
- Recommendations:
    - Healthcare and other licensed professionals with addictive illnesses should receive a comprehensive multidisciplinary evaluation and any indicated treatment by PHP-approved

Addiction Treatment Programs (ATPs) with experience and expertise in working with this population.

- Evaluation, treatment, continuing care providers and PHPs should be familiar with the ASAM Patient Placement Criteria as well as the FSPHP Guidelines in the evaluation and treatment of healthcare and other licensed professionals with addictive illness.
- The public's safety paramount; both ATPs providing clinical services and PHPs providing monitoring and advocacy services must be respectful and mindful of Regulatory Agencies primary mission to protect the public.
- Regulatory Agencies must understand disciplinary action is not always indicated or beneficial to either the professional's sustained remission or public safety.
- Recovering professionals with addictive illness or other potentially impairing health conditions recognize and accept the responsibilities of PHPs and RAs of ensuring the public's safety.

Berge, K.H., Seppala, M.D., & Schipper, A.M. (2009). *Chemical Dependency and the Physician.* Mayo Clin Proc. 2009 Jul; 84(7): 625–631. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2704134/

Although the nature and scope of addictive disease are commonly reported in the lay press, the problem of physician addiction has largely escaped the public's attention. This is not due to physician immunity from the problem, because physicians have been shown to have addiction at a rate similar to or higher than that of the general population. Additionally, physicians' addictive disease (when compared with the general public) is typically advanced before identification and intervention. This delay in diagnosis relates to physicians' tendency to protect their workplace performance and image well beyond the time when their life outside of work has deteriorated and become chaotic. We provide an overview of the scope and risks of physician addiction, the challenges of recognition and intervention, the treatment of the addicted physician, the ethical and legal implications of an addicted physician returning to the workplace, and their monitored aftercare. It is critical that written policies for dealing with workplace addiction are in place at every employment venue and that they are followed to minimize risk of an adverse medical or legal outcome and to provide appropriate care to the addicted physician.

Centers for Disease Control and Prevention. (2016). CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. Retrieved from https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm on July 16, 2018.

CDC obtained input from experts, stakeholders, the public, peer reviewers, and a federally chartered advisory committee in the development process. CDC drafted a set of recommendations and invited subject matter experts, primary care professional society representatives, and state agency representatives (Core Expert Group, listed at the end of the article) to provide individual perspectives on how CDC used the evidence to develop the recommendations. CDC asked experts to undergo a rigorous process to assess and manage possible conflicts of interest; full details on protocols and disclosures are reported in the *MMWR*. CDC also engaged partners from 10 federal agencies and a Stakeholder Review Group of 18 organizations (listed at the end of the article) to provide comment. CDC convened a constituent engagement webinar to obtain additional perspectives from constituents on the key recommendations. To obtain comments from the public on the full guideline, CDC published a notice in the *Federal Register* (80 FR 77351) announcing the availability of the guideline and the supporting clinical and

contextual evidence reviews for public comment. In addition, the National Center for Injury Prevention and Control Board of Scientific Counselors (BSC), a federal advisory committee, established an Opioid Guideline Workgroup (OGW) to review the guideline (members of the BSC and OGW are listed at the end of the article). The OGW issued a report of observations to the BSC. At an in-person meeting, the BSC considered the OGW report, deliberated on the draft guideline itself, and offered an additional opportunity for public comment. The BSC voted unanimously to support the observations made by the OGW; that CDC adopt the guideline recommendations that, according to the workgroup's report, had unanimous or majority support; and that CDC further consider the guideline recommendations for which the group had mixed opinions. At each stage, CDC reviewed and carefully considered comments and revised the guideline.

Objective: To provide recommendations about opioid prescribing for primary care clinicians treating adult patients with chronic pain outside of active cancer treatment, palliative care, and end-of-life care.

Recommendations: There are 12 recommendations. Of primary importance, nonopioid therapy is preferred for treatment of chronic pain. Opioids should be used only when benefits for pain and function are expected to outweigh risks. Before starting opioids, clinicians should establish treatment goals with patients and consider how opioids will be discontinued if benefits do not outweigh risks. When opioids are used, clinicians should prescribe the lowest effective dosage, carefully reassess benefits and risks when considering increasing dosage to 50 morphine milligram equivalents or more per day, and avoid concurrent opioids and benzodiazepines whenever possible. Clinicians should evaluate benefits and harms of continued opioid therapy with patients every 3 months or more frequently and review prescription drug monitoring program data, when available, for high-risk combinations or dosages. For patients with opioid use disorder, clinicians should offer or arrange evidence-based treatment, such as medication-assisted treatment with buprenorphine or methadone.

Center for Substance Abuse Treatment. *Managing Chronic Pain in Adults With or in Recovery From Substance Use Disorders.* Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2012. (Treatment Improvement Protocol (TIP) Series, No. 54.) 1, Introduction. Available from: https://www.ncbi.nlm.nih.gov/books/NBK92051/

Cross addiction is defined as a person with an addiction to one substance may develop an addiction to another substance differing from their original drug of choice. This occurrence may be witnessed when the original drug of choice is no longer an option and/or is no longer accessible. Addiction from one substance can be linked to the addiction of another differing substance. For example, an alcoholic who discontinues using alcohol may being using barbiturates as they both have sedative affects. Individuals with chronic pain issues and history of substance use disorder may be at increased risk of cross-addiction to any medication that acts on the brain as a reinforcing agents (brain reward system). A study of patients hospitalized for oxycodone addiction found that the majority (77 percent) had previous substance use disorders that were not opiate related.

Domino, K.B., Hornbein, T.G, Polissar, N.L., et. al. (2005). *Risk Factors for Relapse in Health Care Professionals with Substance Use Disorders.* JAMA. doi:10.1001/jama.293.12.1453 Retrieved from https://jamanetwork.com/journals/jama/fullarticle/200588.

"The risk of relapse with substance use was increased in health care professionals who used a major opioid or had a coexisting psychiatric illness or a family history of a substance use disorder. The presence of more than 1

of these risk factors and previous relapse further increased the likelihood of relapse. These observations should be considered in monitoring the recovery of health care professionals." "Major opioid use increased the risk of relapse significantly in the presence of a coexisting psychiatric disorder but not in the absence of a coexisting psychiatric disorder." State physician health programs might wish to consider managing substance-using professionals who have 1 or more of these 3 risk factors and those with prior relapse with more intensive and more prolonged monitoring.

Erickson, C.K. *The Science of Addiction: From Neurobiology to Treatment.* 2nd ed. New York, NY: W.W. Norton & Company, 2018.

- Whether you have the disease of addiction or not, you should still be responsible for your behavior, but those with the disease are NOT responsible for causing their disease.
- Just as with diabetes and cancer, patients are accountable for overcoming denial, seeking treatment, and complying with treatment.
- A relapse isn't the result of someone's "will" being weak, but rather that the treatment and plan following treatment was insufficient to overcome the severity of the symptoms.
- "Abuse" is under the control of the user, and the consequences of such use can still be tragic. Drug abuse is still a serious disorder.
- ASAM—most comprehensive care criteria available. Have been examined through multiple studies for their effectiveness and utility.
- Cross-Dependence—relates to whether a person dependent on one drug will also be dependent on other drugs. Anecdotal report suggests that cross-dependence occurs between alcohol and cocaine, alcohol and nicotine, alcohol and benzodiazepines, and heroine and cocaine.
- Simple checklist for risk factors: (see full list attached)

***FDA Medication Guide.* (2018).Retrieved from https://www.fda.gov/Drugs/DrugSafety/ucm085729.htm on August 1, 2018.**

Long list of medications and a link to their FDA medication guide which includes helpful information regarding abuse potential and risks. Below is a list of the most common prescription medications that as a case manager in a peer assistance program, I have seen come up most as being prescribed by physicians and that could put the healthcare professional and/or their recovery at risk. (Summary of each guide).

- *Adderall XR:*
    - Direct link: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/021303s032lbl.pdf#page=15
    - Amphetamines have a high potential for abuse; prolonged administration may lead to dependence.
    - Can cause psychiatric adverse events like psychotic or manic symptoms in patients with no prior history, or exacerbation of symptoms in patients with pre-existing psychosis and Serotonin Syndrome.
    - Study conducted on rates showed memory impairment at 40 mg/kg dose and sporadically with lower doses; a delay in developmental milestone was also noted.

- Amphetamines have been extensively abused. Tolerance, extreme psychological dependence, and severe social disability have occurred.
- Manifestations of chronic
- intoxication with amphetamines may include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxication is psychosis, often clinically indistinguishable from schizophrenia.
- Particular care should be taken if prescribing to bipolar patients.

- *Suboxone/Buprenorphine:*
  - Direct link: https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/020733s022lbl.pdf#page=30
  - Suboxone is a REMS drug per the FDA.
  - Per the FDA guidelines regarding suboxone overdose can occur. "If you take too much SUBOXONE or overdose, call Poison Control or get emergency medical help right away."
  - Do not stop taking SUBOXONE suddenly. You could become sick and have withdrawal symptoms because your body has become used to the medicine. Physical dependence is not the same as drug addiction. Your doctor can tell you more about the differences between physical dependence and drug addiction. To have fewer withdrawal symptoms, ask your doctor how to stop using SUBOXONE the right way.
  - "**Buprenorphine can cause drowsiness and slow reaction times."** This may happen more often in the first few weeks of treatment when your dose is being changed, but can also happen if you drink alcohol or take other sedative drugs when you take SUBOXONE.
  - Common side effects include of SUBOXONE include: "Drug withdrawal syndrome, Intoxication (feeling lightheaded or drunk), Numb mouth, Dizziness, Sleepiness, Fainting, Blurred vision, Disturbance in attention, and more (see link for further symptoms).
    - ** These are the ones that would seem more of a risk to those in the healthcare profession.
  - Section 5.1 Addiction, Abuse, and Misuse states:
    - "SUBOXONE sublingual tablets contain buprenorphine, a schedule III controlled substance that can be abused in a manner similar to other opioids, legal or illicit.
  - Section 9.2 Abuse:
    - "Like morphine and other opioids, has the potential for being abused and is subject to criminal diversion. This should be considered when prescribing or dispensing buprenorphine in situations when the clinician is concerned about an increased risk of misuse, abuse, or diversion. Abuse of buprenorphine poses a risk of overdose and death. This risk is increased with the abuse of buprenorphine and alcohol and other substances, especially benzodiazepines. The healthcare provider may be able to more easily detect misuse or diversion by maintaining records of medication prescribed including date, dose, quantity, frequency of refills, and renewal requests of medication prescribed. Proper assessment of the patient, proper prescribing practices, periodic re-evaluation of therapy, and proper handling and storage of the medication are appropriate measures that help to limit abuse of opioid drugs."

- *Tramadol/Ultram:*
    - (Other links to view guide for: Ultracet, & Ultram ER.)
    - Direct link: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/020281s039lbl.pdf#page=44
    - Opioid medicine that can put you at risk of overdose and death. "Even if you take your dose correctly as prescribed you are at risk for opioid addiction, abuse, and misuse that can lead to death".
    - "Taking ULTRAM with other opioid medicines, benzodiazepines, alcohol, or other central nervous system depressants (including street drugs) can cause severe drowsiness, decreased awareness, breathing problems, coma, and death."
    - Use the lowest dose possible for the shortest time needed.
    - Ultram can make you sleepy, dizzy, or lightheaded. "Ultram exposes patients and other users to the risk of opioid addiction, abuse and misuse, which can lead to overdose and death. Assess each patient's risk prior to prescribing Ultram, and monitor all patients regularly for the development of these behaviors/conditions."
    - Cases of Serotonin Syndrome have been reported while using tramadol. This can cause: hallucinations, coma, neuromuscular aberrations, agitation, etc."
- *Xanax/Alprazolam:*
    - Direct link: https://www.accessdata.fda.gov/drugsatfda_docs/label/2016/018276s052lbl.pdf#page=24
    - Taking benzodiazepines with opioid medication, alcohol or central nervous system depressant (including street drugs) can cause severe drowsiness, breathing problems, coma, and death.
    - Xanax can slow your thinking and motor skills.
    - Can be abused or lead to dependence. It can lead to both physical and psychological dependence. Xanax may cause increase in activity and talking (hypomania and mania) in people who have depression.
    - Using with opioids can lead to profound sedation, respiratory depression, coma, and death. Using the two medications have been found in studies to increase risk of drug-related death.
    - Certain studies have found life-threatening or direct consequence of physical dependence to Xanax.
- *Ambien/Zolpidem:*
    - Studies of abuse potential in former drug abusers found that the effects of single doses of zolpidem tartrate 40 mg were similar, but not identical, to diazepam 20 mg, while zolpidem tartrate 10 mg was difficult to distinguish from placebo. Because persons with a history of addiction to, or abuse of, drugs or alcohol are at increased risk for misuse, abuse and addiction of zolpidem, they should be monitored carefully when receiving zolpidem or any other hypnotic.

FDA Website regarding Risk Evaluation and Mitigation Strategies (REMS)
https://www.fda.gov/Drugs/DrugSafety/REMS/default.htm

A Risk Evaluation and Mitigation Strategy (REMS) is a drug safety program that the U.S. Food and Drug Administration (FDA) can require for certain medications with serious safety concerns to help ensure the

benefits of the medication outweigh its risks. REMS are designed to reinforce medication use behaviors and actions that support the safe use of that medication. While all medications have labeling that informs health care stakeholders about medication risks, only a few medications require a REMS. REMS focus on preventing, monitoring and/or managing a specific serious risk by informing, educating and/or reinforcing actions to reduce the frequency and/or severity of the event.

Medications on the REMS can be found at https://www.accessdata.fda.gov/scripts/cder/rems/index.cfm list include, but are not limited to: Suboxone/Subutex, Extended-Release and Long-Acting (ER/LA) Opioid Analgesics, and Buprenorphine Transmucosal Products for Opioid Dependence (BTOD).

- Adderall:
    - Per the FDA guidelines on Adderall – it should not be taken if you have a history of drug abuse. https://www.fda.gov/downloads/Drugs/DrugSafety/UCM467750.pdf
- Suboxone/Subutex:
- Vivitrol
- Apadaz (benzhydrocodone and acetaminophen), tablet

Groshkova T, Best D, & White, W. (2012). The Assessment of Recovery Capital: Properties and psychometrics of a measure of addiction recovery strengths. Drug Alcohol Rev. 2013 Mar;32(2):187-94. doi: 10.1111/j.1465-3362.2012.00489.x.

Construct for assessing individual progress on a recovery journey. Create a scale that assessed addiction recovery capital (see attached)

- Assessment of Recovery Capital (ARC) is a brief and easy to administer measurement of recovery capital that has acceptable psychometric properties and may be a useful complement to deficit-based assessment and outcome monitoring instruments for substance dependent individuals in and out of treatment.

Gruber, S.A., Sivleri, M.M., & Yurgelum-Todd, D.A. (2007). *Neuropsychological Consequences of Opiate Use.* Neuropsychological Review. Retrieved from https://www.researchgate.net/profile/Marisa_Silveri/publication/6148618_Neuropsychological_Consequences_of_Opiate_Use/links/0f31752d5502c978fd000000.pdf**.**

- "Subjects receiving morphine demonstrated significant impairment after one hour on all memory tests, and scores on the CFFT were reduced for the six-hour observation period as compared to control subjects. The authors concluded that single oral doses of morphine result in minimal impairment of cognitive and psychomotor function."
- Recent studies provide a growing body of evidence that chronic opiate use is associated with significant impairment on several dimensions of cognitive functioning.
- "Given that buprenorphine is a partial opioid agonist, the administration of B/N for opioid dependence may result in less impairment of cognitive functions". "acute doses of buprenorphine alone and

buprenorphine combined with naloxone produced mild impairment in non-dependent opioid users on psychomotor tasks."

- Study findings: "In general, the use of opiates appears to have both acute and long-term effects on cognitive performance. In addition to the increased subjective effects reported by individuals who take opiates, the studies to date indicate a relatively broad spectrum of impairments in attention, concentration, visual and verbal recall, and visuospatial skills commonly associated with opioid administration. Reductions in psychomotor speed and reduced hand-eye coordination are also commonly reported. The long-term effects of opiate use appear to have the greatest impact on executive functions, including the ability to shift cognitive set, inhibit inappropriate response tendencies and in perseverative errors."
- In chronic opiate abusers it is difficult to disentangle the effects of opiate use on cognitive performance from other factors that may affect neurobehavioral measures.
- Coss-sectional neuropsychological evaluation can offer measure of individual's overall cognitive strengths/weaknesses.

Hamza, H. & Bryson, E.O. (2012). *Buprenorphine Maintenance Therapy in Opioid-Addicted Health Care Professionals Returning to Clinical Practice: A Hidden Controversy*. Mayo Clin Proc. 2012;87(3):260–267. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3538407/

- 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.
- Despite its (Suboxone) partial agonist qualities it still induces the same physiologic response as full agonists, including cognitive and psychomotor impairment, memory deficit, miosis, repertory depression, etc. It has been reported by uses to have "euphoric" and "drug-liking" qualities and is associated with dug dependence and withdrawal. Vititrol, Revia, and Narcan do not have a DEA schedule, are listed as not having a diversion and abuse potential, and are not potentially nuerogonitive and psychomotor impairing. They are also recommended by the AANA (American Association of Nurse Anesthetists) for reentry. Subutex, Suboxone, and Dolophine all have the potential to be abused and for diversion, are DEA Schedule II or III drugs and have the potential for nuerogonitive and psychomotor impairment. They are all 3 not recommended by the AANA for reentry.
- "It has been found that the combination drug of buprenorphine and naloxone had a higher abuse ratio than plain buprenorphine". One study analyzed poison control center hot-lines and found criteria that would highly suggest buprenorphine can be abused. "Psychomotor-cognitive tests included eye-hand coordination, auditory reaction time, a logical reasoning test, and a memory test. The results were unexpected: buprenorphine produced impairment in 5 of 6 measures of psychomotor performance in a dose-dependent fashion, whereas morphine caused minimal impairment." The article further goes on to

discuss numerous other studies where impairments and/or delays in functioning were noted as a result of buprenorphine.

- This article discusses PHP programs and how the boards may not be aware of the HCP (Health care professional or nurse) working with them. The article asked 51 physician programs in the U.S. what their stance was regarding buprenorphine maintenance therapy. Nursing programs were more cooperative. There is a detailed table exploring their findings of each state's protocol included in the article. For Texas it was noted that Nursing and CRNA's alternatives to discipline and/or SBON policy do not allow it under any circumstance. The PHP program for TX reported "No policy; but allowed if prescribed by the treating psychiatrist". States that had a "not allowed stance" for Nurses were: Arkansas, Colorado, Florida, Indiana (nurses tapered off before going back to clinical duties), Kansas, Louisiana, Massachusetts, New Hampshire (nurses tapered off before going back to clinical duties), New Jersey, Ohio, Pennsylvania, and Tennessee (nurses tapered off before going back to clinical duties).
- "The effect of abstinence-based recovery has implications apart from the public health and safety considerations. The improved quality of life for the professional under this model of treatment further justifies the use of the abstinence model specifically in HCPs, and the literature suggests that the success rate of PHPs is much higher than in other populations." "PHPs that use an abstinence-based model for physicians in recovery report success rates far in excess of other programs.23 There is a long history of success using this model, and the most recent data reported only 22% of physicians testing positive for drugs of abuse at any time during their 5-year monitoring contract and fully 71% remaining licensed and employed 5 years after their initial treatment."
- "More important, these drugs may actually be "psychotoxic" to those in recovery, and inability to remain abstinent without opioid maintenance therapy may be a potential predictor of increased risk for relapse (Mark Broadhead, MD, medical director of the Idaho Physician Health Program, oral communication, February 24, 2011)". Employers should be made aware of potential negative patient outcomes that could occur as a result of an employee using the medications.
- "When considering all of the aforementioned issues with buprenorphine diversion, it does not seem reasonable to prescribe this medication to an HCP with a history of opioid addiction. After carefully considering the evidence, we believe that opioid-substitution therapy with buprenorphine is not a reasonable choice for this particular patient population. HCPs are engaged in safety-sensitive work that requires vigilance and full cognitive function. We therefore recommend abstinence-based recovery until studies with this specific HCP population performed in a simulated health care environment document that highly safety-sensitive tasks can be performed without deterioration in performance."

Haylett, S.A., Stephenson, G.M., & Lefever, R.M. (2004). *Covariation in Addictive Behaviors: A Study of Addictive Orientations Using the Shorter PROMIS QUESTIONNAIR.* Addiction Behaviors. 29(1): p. 61-71. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/14667421.

"Previous research has suggested that different addictive behaviors are linked, such that decreases in one may lead to compensatory increases in another, or even that one addiction may lead to another. Such views on "cross addiction" are encouraged by the prevailing tendency amongst researchers from very different theoretical backgrounds to view different addictions as serving a common function, such as mood alteration, or

the "management of hedonic tone." ” “Clinically, the results indicate the drawbacks of addressing addictive behaviours singly, and the potential importance of addictive orientations in treatment, and relapse prevention.”

Hazeldon. (1999). *Cross-Addiction: The Back Door to Relapse* [Video file]. Retrieved July 26, 2018, from https://www.ncjrs.gov/App/publications/Abstract.aspx?id=198538

“Once an addict is addicted to one drug, he or she is addicted to all drugs. The addict has lost the ability to have a casual relationship with any drug.” Addiction changes ones behavior and thoughts, and physically alters the structure of the brain. Some who has a substance use issue’s brain has a particularly strong reaction to chemicals that produce euphoria and a “body rush.” The brain remembers what causes pleasure and produces the desire to repeat this pleasure. Someone in recovery may have the illusion that some drugs are “safe” from addiction. These are the drugs that can cause a relapse. “Understanding cross-addiction is vital to staying clean and sober.” The addict must practice total abstinence and avoid high-risk situations.

Herholz, K & Wolf-Dieter, H. (2006). *Brain Receptor Imaging*. Journal of Nuclear Medicine, (47). Page 7a- 8a. Retrieved from: http://jnm.snmjournals.org/content/47/2/302.long

“Receptors have a prominent role in brain function, as they are the effector sites of neurotransmission at the postsynaptic membrane, have a regulatory role on presynaptic sites for transmitter reuptake and feedback, and are modulating various functions on the cell membrane.” Receptors are structures on the cellular membranes after interaction with specific ligands (1st messenger transmitters) a signal is sent which causes a specific response which is mediated by the 2nd messenger (g-protein coupled receptors, or ion channels). Receptors have a central role in neurotransmission and neuromodulation and are involved in all brain functions, ranging from motor performance to memory, emotion, and pain.

Jage, J. (2004). *Opioid Tolerance and Dependence – Do They Matter?* European Journal of Pain 9(2005) p. 157-162. doi 10.1016/j.ejpain.2004.11.009. Retrieved on August 1, 2018 from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.629.8839&rep=rep1&type=pdf.

“Cross-tolerance is the tolerance to one opioid that develops as the result of the continued use of another substance with similar pharmacological action.” (p. 158) The drug history (including alcohol or illegal drugs) may be a predictor of the development of cross-dependence in patients undergoing opioid analgesia. “Long-term central neuronal plasticity may be an additional cause of cross-dependence.” (p. 160)

Jarvis,M, Williams, J, Hurford, M, Lindsay, D, Lincoln, P, Giles, L, Luongo, P, & Safarian, T. (2017). Appropriate Use of Drug Testing in Clinical Addiction Medicine. Journal of Addiction Medicine: May/June 2017 - Volume 11 - Issue 3 - p 163–173. Retrieved from: https://journals.lww.com/journaladdictionmedicine/Fulltext/2017/06000/Appropriate_Use_of_Drug_Testing_in_Clinical.1.aspx

- provides guidance about the effective use of drug testing in the identification, diagnosis, treatment, and promotion of recovery for patients with, or at risk for, addiction
- ASAM's intent with this document, however, is to focus primarily on patients in addiction treatment and recovery, where drug testing is used to assess the patient for a substance use disorder (SUD), monitor

the effectiveness of their treatment plan and support recovery, and to also focus on selected special populations at risk for addiction in general healthcare settings.

- Drug testing should be used in combination with a patient's self-reported information about substance use.
- Drug testing is an important supplement to self-report because patients may be unaware of the composition of the substances(s) they have used.
- Drug testing is particularly appropriate for patients facing negative consequences if substance use is detected, who are therefore less likely to provide accurate self-reported substance use information.
- Discrepancy between self-report and drug tests results can be a point of engagement for the provider.
- Because evidence suggests that drug testing assists with monitoring adherence and abstinence in treatment and can improve patient outcomes, drug testing should be used widely in addiction treatment settings.
- Treatment providers should include drug testing at intake to assist in a patient's initial assessment and treatment planning.
- Results of a medical and psychosocial assessment should guide the process of choosing the type of drug test and matrix to use for assessment purposes.
- Drug test results should not be used as the sole determinant in assessment for SUD. They should always be combined with patient history, psychosocial assessment, and a physical examination.
- Drug testing may be used to help determine optimal placement in a level of care.
- Drug testing can serve as an objective means of verifying a patient's substance use history.
- Drug testing can demonstrate a discrepancy between a patient's self-report of substance use and the substances detected in testing.
- For a patient presenting with altered mental status, a negative drug test result may support differentiation between intoxication and presence of an underlying psychiatric and/or medical condition that should be addressed in treatment planning.
- Drug testing panels should be based on the patient's drug(s) of choice and prescribed medications, and drugs commonly used in the patient's geographic location and peer group.
- Providers should not rely on the National Institute on Drug Abuse 5 (also known as the SAMHSA 5) as a routine drug panel.
- Addiction treatment programs/providers should establish a routine immunoassay panel.
- Providers should not take a confrontational approach to discussing positive test results with patients.
- When making patient care decisions, providers should consider all relevant factors surrounding a case rather than make a decision based solely on the results of a drug test.
- Considering all relevant factors is particularly important when using drug test results to help make irreversible patient care decisions.
- Providers may consult with a medical toxicologist or a certified Medical Review Officer (MRO) for assistance in interpreting drug test results.
- In the event of a positive definitive test result, consider intensifying treatment or adding adjunctive treatments.

- Providers should use caution when using drug test results to interpret a patient's amount or frequency of substance use. Individual metabolism and variability in absorption should be considered.
- Providers should not over-interpret a negative definitive test result. It does not rule out substance use or SUD, as the latter is a clinical diagnosis.
- Providers should look to tests' detection capabilities and windows of detection to determine the frequency of testing.
- Providers should understand that increasing the frequency of testing increases the likelihood of detection of substance use, but there is insufficient evidence that increasing the frequency of drug testing has an effect on substance use itself.
- Drug testing should be scheduled more frequently at the beginning of treatment; test frequency should be decreased as recovery progresses.
- Random unannounced drug tests are preferred to scheduled drug tests.
- Urine should be considered the most well-established and well-supported biological matrix for presumptive detection of substance use in a clinical setting.
- Urine should be considered the matrix most prone to sample tampering through dilution, adulteration and substitution.
- Providers should consider samples that have been tampered with to be presumptive positive.
- For patients with past incidences of dilute urine samples, it is advisable to collect samples in the morning or request that patients decrease water intake prior to sample collection.
- For patients with past incidences of dilute urine samples, use creative solutions, such as collecting before work, on days off, or use an alternative matrix.
- Urine testing for the use of alcohol is appropriate with current clinical tools. Ethyl glucuronide is an appropriate target metabolite when monitoring a patient for complete alcohol abstinence.Ethanol-containing products, including hand sanitizers and mouthwash, should be avoided before an ethyl glucuronide test.
- Urine testing is helpful when assessing amphetamine use. Particular caution should be paid to the interpretation of amphetamine immunoassays due to known limitations in specificity.
- Urine testing is helpful when assessing benzodiazepine use.Particular caution should be paid to the interpretation of benzodiazepine immunoassays due to known limitations in specificity.Immunoassay results should be used cautiously when monitoring a patient's adherence to prescribed benzodiazepines. If a patient reports that he or she is taking the drug but a urine drug screen is negative, further analysis using definitive testing should be considered.
- Urine testing is helpful when assessing opioid use.Particular caution should be paid to the interpretation of opiate immunoassays due to known limitations in specificity.Patients should be instructed to avoid the consumption of food items that contain poppy seeds because they can result in a positive opiate test.
- Urine testing is helpful when assessing cannabis use, although it is difficult to determine the timing or cessation of consumption in chronic users due to extended windows of detection for tetrahydrocannabinol.

- The relevance of blood testing in addiction treatment is limited mostly to emergency situations where there is a need to assess intoxication or impairment.
- No statements about the appropriateness of breath testing were endorsed by the expert panel.
- Hair testing in addiction treatment can detect long-term patterns of use. Routine use of hair testing is not appropriate for addiction treatment.
- Drug testing frequency is determined by stage of treatment as well as other patient factors and should be individualized.
- Testing should be more frequent during the stabilization period and less frequent during the maintenance period.
- Drug testing during and after tapering from methadone or buprenorphine continues to be an important way to support a patient's recovery; providers may want to consider increasing drug testing frequency during tapering and in the period after tapering.
- For patients in OTP settings, the federally mandated 8 tests per year should be seen as a minimum, and it is often appropriate to perform testing more frequently than 8 times per year; determinations about testing frequency and duration should be made with consideration of individual patients, as noted above.

Conclusions: Drug testing should be a routine part of initial and ongoing patient assessment of recent substance use in all addiction treatment settings. Drug test results should be not be used as the sole determinant when making patient care decisions; instead, they should be used in conjunction with patients' substance use self-reports, treatment history, psychosocial assessment, and physical examination. Drug testing should be included at intake to assist in a patient's initial assessment and treatment planning and as a routine part of ongoing assessment for substance use that could complicate treatment response and patient management. Test selections should be individualized based a patient's drug of choice, prescribed medications, and drugs commonly used in the patient's geographic location and peer group. Treatment setting factors such as opportunity for substance use, the need to maintain a drug-free therapeutic environment, ensuring adherence with prescribed medications and monitoring for possible diversion also play a role in test selection. Frequency of testing should be dictated by patient acuity and level of care and tests' detection capabilities and windows of detection.

Jerrot, S.E., & Stewar, S.H. (2002). *Cognitive and Sedative Effects of Benzodiazepine Use.* Current Pharmaceutical Design. 8(1). Retrieved from https://www.researchgate.net/profile/Sherry_Stewart/publication/11547699_Cognitive_and_Sedative_Effects_of_Benzodiazepine_Use/links/00b7d51e94c63d528c000000/Cognitive-and-Sedative-Effects-of-Benzodiazepine-Use.pdf

Studies using a wide variety of BZ's (Benzodiazepines) and numerous experimental paradigms showed sedation is increased and attentional processes are impaired acute BZ use. However, impairments are are subject to tolerance and are not a major problem for long term BZ users. Memory deficit, however, appears to be severe and long lasting. BZ's impair long term memory in an "anterograde fashion" and the memory deficits are apparent in memory tasks that are comparable to similar real-life memory requirements. Overall, BZ's impair performance on both implicit and explicit memory tasks.

Koob, G. F. (2011). *Nuerobiology of Addiction.* The Journal of Lifelong Learning in Psychiatry, (Winter 2011, Vol. IX, No.1). Retireved July 29, 2018 from http://www.eoncology.eu/wp-content/uploads/2014/03/neurobiology-of-adiction-Koobs.pdf .

The neurobiological substrates for the acute reinforcing effects of drugs of abuse show that Cocaine, Amphetamine, Nicotine, and tetrahydrocannabinol, and alcohol all have dopamine transmitters in common at the neurological site of the nucleus accumbens.

Lembke, A., Humphrey's, K., Newmark, J., (2016). *Weighing the Risks and Benefits of Chronic Opioid Therapy.* 93 (12). Retrieved on August 2, 2018 from https://pdfs.semanticscholar.org/806f/7db09df7e1cf14ad3a2cb49c4bdf75be7227.pdf .

Evidence is limited for the use of chronic opioid therapy for chronic pain. The risk of chronic therapy are significant and may outweigh any benefits. Risks include opioid misuse, opioid use disorder, and overdose. If opioid misuse is noted, opioids don't necessarily need to be discontinued but the misuse should be noted and intervention should be performed to change the behavior. " It is not unreasonable for discontinuation of chronic opioid therapy to take many months. Benzodiazepines should not be coprescribed during chronic opioid therapy or when tapering, because some patients may develop cross-dependence." (p. 982)

Levinthal, J.F. (2010). *Drugs, Behavior, and Modern Society.* (pp. 66-67, 80-82). Allyn & Bacon.

Cross-Tolerance is the phenomena when the effects of one drug might automatically induce a tolerance of another drug. This can occur with both physical and psychological effects usually with alcohol, barbituates, and benzodiazepines. For example, an alcoholic can develop a tolerance for a barbiturate. If two or more drugs activate a different site on the same receptor; the receptor itself would then not be able to tell the drugs apart. "The neuronal effects of the drugs over an extended period of time would be equivilant and interchangeable". In general, substances that have a similar psychoactive effect can share common receptors. Cross- dependence is when one replaces the dependence of one drug with another drug. With cross tolerance and cross-dependence, you can have multiple substances that bind with the same receptors in the brain. This causes similar psychoactive effects as they share the same common receptor sites.

Amphetamines, cocaine, heroin, alcohol, and nicotine are all very different pharmacologically but they are remarkably similar in the way people and animals react to them. The parallels are numerous enough that there might exist a common physiological process in the brain that links them together. Dopamine related processes in the nucleus accumbens is a reinforcing effect of many abused drugs.

Loeber, S., Kniest,A., Diehl, A., Mann, K., Bernard, C. (2008). *Neuropsychological Functioning of Opiate-Dependent Patients: A Nonrandomized Comparison of Patients Preferring either Buprenorphine or Methadone Maintenance Treatment.* The American Journal of Drug and Alcohol Abuse, 34:5,584 -593. doi: 10.1080/00952990802308239

Several studies/authors have suggested that buprenorphine, as a partial μ-opioid receptor agonist, may be associated with reduced sedation and impairment of psychomotor and cognitive performance. In line with this, the results of several dose effect studies show that buprenorphine only mildly impairs gross motor performance and does not influence more complex cognitive functions. This study looked at the neuropsychological

functioning of opioid-dependent outpatients on either buprenorphine or methadone maintenance. The results found and presented in this study suggest that buprenorphine maintenance treatment for opiate-dependent patients is not associated with less cognitive impairment when compared with methadone maintenance treatment.

Based on the assumption that buprenorphine may be associated with less sedation and impairment of psychomotor and cognitive performance, they administered several neuropsychological tests and a subjective measure to assess different aspects of vigilance, sustained attention, memory functioning, etc. When comparing date they found that there was no difference between the buprenorphine and methadone regarding measures of neuropsychological functioning. (Per this article, These results are also similar to findings by Soyka et. al.) The study did state, "We cannot rule out that our results are subject to uncontrolled effects." "In addition, a comparison with normative data shows that opiate dependent-patients perform worse than most subjects in the normative control samples in our measures of neuropsychological functioning."

Longo, L.P., Johnson, B. (2000). *Addiction: Part I. Benzodiazepines – Side Effects, Abuse Risk, and Alternatives.* The American Academy of Family Phyisicans. (61:2121-8). Retrieved from https://pdfs.semanticscholar.org/725c/bab0f1060a771d1d5c5d6cf2594e1d8c91be.pdf

Studies have found that up to 41% of those with alcohol use disorder will abuse benzodiazepines at some time. 80% of alcoholics under the age of 30 have been addicted to or use at least one other drug. "Medical prescriptions constitute the primary source of supply for people who abuse benzodiazepines." Benzodiazepines have multiple uses for those with substance use issues: they are used to enhance the euphoriant effects of opioids (such as to "boost" methadone doses), to alleviate withdrawal or abstinence syndromes (such as between heroin "fixes"), to temper cocaine highs, to augment alcohol synergistically and to modulate withdrawal states. Clonazepam was perceived as "safe", but now addiction medicine specialists have found that it is also frequently abused as a street drug. On the other hand, oxazepam (Serax), clorazepate (Tranxene) and chlordiazepoxide appear to have lower reinforcing effects than other benzodiazepines.

Mood-altering substances are most highly reinforcing in patients with chemical dependence if the agent has a rapid onset of action, a high potency, a brief duration of action, high purity and water solubility (for intravenous use) or high volatility (ability to vaporize if smoked).

Alternatives to Benzodiazepines include: antidepressants, anticonvulsants, buspirone (Buspar), certain antihypertensive agents and newer neuroleptics all have been shown to be effective in subsets of patients with anxiety. Addiction medicine specialists believe benzodiazepines are contraindicated in patients with alcohol or drug abuse issues and/or are in recovery.

***Louisiana State Board of Nursing Advisory Statement Regarding Practicing While Taking Prescribed Narcotics.* Retrieved from https://www.lsbn.state.la.us/Portals/1/Documents/DeclaratoryStatements/Declerat20.pdf**

"Licensed nurses are accountable for assuring that their actions and behaviors meet all applicable standards for safe and competent practice at all times. This requires constant awareness of the demands of the job and a continual process of evaluation and assessment in order to make sure that the nurse is fit to practice and competent to safely perform those functions that fall within the defined scope of nursing practice and for which

the nurse has accepted responsibility. Nurses, who practice while not fit to do so, may be subject to disciplinary action by the board including but not limited to license suspension, revocation, or monitored practice. A legitimate prescription is not an acceptable excuse for impairment in the workplace." "Registered Nurses who are required to use prescription drugs authorized by a licensed prescriber are responsible for being aware of any effect such drug may have on the performance of their duties and to report the use of such substances to their supervisor prior to reporting for work.

"If a prescription medication states it Might or Could cause any form of impairment, a prescriber's letter clarifying the impact of these possible side effects should be required. The prescriber's note must state the medicine will not negatively impact the nurse's ability to function in his/her job capacity.

"The prescription or written document must also contain the name of the substance, the quantity/amount to be taken, and the period of authorized use. Any abuse or misuse of legal drugs is prohibited. The drug shall be used only within the parameters set by the prescriber and quantity prescribed. The prescriber's note does not absolve the nurse from making a personal assessment of expected performance in relation to the assignment. The nurse and manager are in the best position to determine whether the above referenced guidelines can be met regardless of the prescriber's statement. It is the nurse's responsibility to notify the prescribing health care professional of the duties required by the nurse's position and to ensure that the prescriber approves the use of the prescription medication while the nurse is performing his or her duties.

"One such definition for Safety Sensitive Employees is any employee who, in the regular or foreseeable discharge of responsibilities, engages in conduct creating a reasonable risk of injury to self or others such that even a momentary lapse of attention could reasonably result in consequences of harm, loss or injury elevated by use, prescribed or otherwise, of drugs.* Therefore, safety sensitive employees may be subject to discipline for failure to inform the appropriate supervisor regarding the use of prescription drugs. Additionally, employers may choose to restrict the use of all mood-altering chemicals when performing in a safety sensitive position or allow nurses taking prescribed medications to only work in positions which are not deemed safety sensitive.

"Please be advised that grounds for disciplinary proceedings against a Registered Nurse are specified in R.S. 37:921: Of particular relevance to this topic are the following: 3. is unfit or incompetent by reason of negligence, habit, or other cause; 4. has demonstrated actual or potential inability to practice nursing with reasonable skill and safety to individuals because of use of alcohol or drugs; or has demonstrated inability to practice nursing with reasonable skill and safety to individuals because of illness or as a result of any mental or physical condition; This includes motor or cognitive impairment or the potential for impairment from prescribed medications. Other Causes—includes, but is not limited to: b. possessing a physical impairment or mental impairment which interferes with the judgment, skills or abilities required for the practice of nursing; c. failure to utilize appropriate judgment;"

Maldonado, R., Valverde, O., & Berrendero, F. (2006). *Involvement of Endocannabinoid System in Drug Addiction.* Trends in Nueroscience. 23 (4) p. 225-232. Retriefed on August 3, 2018 from https://waayb.com/wp-content/uploads/2017/11/Involvement-of-the-endocannabinoid-system-in-drug-addiction.pdf.

- Cross dependence has also been reported between opioid and cannabinoid compounds. Drugs of abuse interact with these common brain circuits producing adaptive changes leading to a profound dysregulation of brain motivational and reward pathways. The mesocorticolimbic system represents a common neuronal substrate for the reinforcing properties of drugs of abuse, where both dopamine and opioid transmission are crucial. "Indeed, CB1 cannabinoid receptors are abundant in the brain reward circuitry and participate in the addictive properties induced by different drugs of abuse." (p. 226).
- "The endocannabinoid system is certainly the primary site of action for the rewarding and pharmacological responses induced by cannabinoids. However, this system plays an overall modulatory effect on the reward circuitry and also participates in the rewarding and addictive properties of all prototypical drugs of abuse." (p. 226)
- "Cannabinoids and alcohol activate similar reward pathways, and CB1 receptors also seem to regulate the reinforcing properties of alcohol." (p. 227)
- "Several studies have revealed the existence of functional bidirectional interactions between cannabinoid and opioid systems, and both systems participate in the common circuits involved in the addictive properties of different drugs of abuse." (p. 228).
- The endocannabinoid system is the addictive properties of prototypical drugs of abuse by at least:
    - 1st: First, the system is directly involved in the primary rewarding effects of cannabinoids, nicotine, alcohol and opioids by acting on common cellular mechanisms and/or by permitting the effects of these drugs on mesolimbic transmission.
    - 2nd: the endocannabinoid system is involved in the motivation to seek the drug by a dopamine-independent mechanism; this has been demonstrated for psychostimulants and opioids and might also be the case for other drugs of abuse.

Malliarakis, K.D, Smith, V., & Darbro, N. (2012). *Regulatory Management of Substance Use in High-Risk Nurse Population.* Journal of Nursing Regulations. 2 (4) pp. 32 -39. Retrieved on July 30, 2018 from https://ncsbn.org/Regulatory_Management_of_Substance_Use.pdf.

This article discusses challenges of nurses with substance use issues who need prescription medications and explores assessment techniques for nurses with substance abuse disorder that require prescription medications. "Chemically dependent nurses who are in recovery and take prescribed drugs with addictive potential for pain have a substantial risk of relapse and compromise of their recovery". "In one study, 45% of patients who had a history of chronic nonmalignant pain and substance abuse demonstrated aberrant medication-taking behavior consistent with relapse while taking opiates to manage pain." But those that relapsed while receiving chronic pain treatment were not in a 12-step program.

- Poorly managed pain can lead to self-medication, drug-seeking behavior, and pseudo addiction.

- Addiction and pain specialists report that the assessment of pain in substance-dependent populations is complicated due to their lack of objective measures to assess pain.
- Chronic drug users can display neuropsychological impairment in the domains of executive and memory function.
- *The following are ways to monitoring a nurse taking abusable prescription medications:*
    - *Neuropsychological evaluation:*
        - To assess cognition, problem solving, memory, and judgment as well drug testing and electronic prescription monitoring can be used to monitor nurses who need to take abusable substances.
        - Assessments should be conducted during the time of day that is closest to the nurse's work schedule and the nurse should be on his/her regular medication regiment for the evaluation. The BON should not worry about the type or amount of medication being taken, but focus on whether or not the nurse is able to think clearly and function safely.
    - *Behavior monitoring*:
        - Should be considered for nurses taking abusable substances while working.
        - Behavioral monitoring must include workplace restrictions and supervision along with routine audits of the nurse's workplace for access to controlled substances.
    - *Electronic Prescription Monitoring:*
        - By using EPMP's (electronic prescription monitoring programs).
        - Information from EPMP would help to monitor the nurses and provide information to the providers.
- Nurses who have a substance use disorder and need a prescribed mood-altering or potentially impairing medication may be able to participate in an alternative program if they agree to the following :
    - At least 5 years of monitored practice and recovery.
    - A neuropsychological evaluation before returning to nursing practice and at any time cognition appears to be negatively impacted because of illness or treatment.
    - Treatment with a provider who has expertise in addictions and pain management and submits monthly provider progress reports.
    - Use of one pharmacy for all medications and provision of quarterly prescription profiles.
    - Regular verification of prescriptions obtained through the EPMP, if available.
    - Direct supervision when practicing nursing.
    - No night shift, no shift longer than 10 hours, and no more than 40 work hours per week (or fewer than 40 hours per week, depending upon provider recommendation).
    - Monthly reports from the employer for the first year and if no identified issues, quarterly thereafter.
    - No access to controlled substances in the workplace for at least 12 months if a history of diversion, prescription fraud, or multiple prescribers exists.
    - Written notification to nursing employer and monitoring program of any changes to medications, including addition, deletion, or change in dosage, before assuming patient-care duties.
    - Submission of a letter from provider confirming safe-to-practice with any changes in medication

- Agreement to immediately cease practice upon notification of noncompliance or symptoms suggestive of or known to be part of a relapse.
- Random drug screening, weekly during the first year and three times a month during the second year, tapering to a minimum of two times a month if fully compliant.
- Attendance at 12-step meetings at least three times a week to provide accountability and connection to other substance free individuals.
- Attendance at a weekly nursing support meeting.
- Participation in relapse prevention therapy with a provider who has expertise in pain management, addiction, and relapse.

May, J.A., et. al. (2001). *The Patient Recovering from Alcohol or Drug Addiction: Special Issues for the Anesthesiologist.* Anesthia & Analgesia, 92 (6), pp. 1601-1608. Retrieved on July 30, 2018 from https://journals.lww.com/anesthesia-analgesia/Fulltext/2001/06000/The_Patient_Recovering_from_Alcohol_or_Drug.50.aspx.

Different drugs of abuse, including those routinely used by anesthesiologists, may activate different locations within the in the brain, but all lead to a similar reward stimulation. As a result, using one drug may impersonate the reinforcing effects of another; this phenomenon is termed "cross-addiction." Permanent alterations in reinforcement neurocircuitry also appear to persist despite long-term abstinence, and support the clinical notion of addiction as a chronic, incurable disease. Data further suggest that the administration of drugs of abuse commonly used during and after anesthesia may reactivate addiction regardless of the relative length of abstinence.

McCabe, S.E., Cranford, J.A., & Boyd, C.J. (2006). *The Relationship Between Past-Year Drinking Behaviors and Non-Medical Use of Prescription Drugs: Prevalence of Co-occurrence in a National Sample.* Drug Alcohol Depend. 2006 Oct 1; 84(3): 281–288. doi: 10.1016/j.drugalcdep.2006.03.006

In a study conducted by McCabe, Cranfrod, and Boyd they found non-medical use of prescription opioids, stimulants, tranquilizers, and sedatives was more prevalent among people with alcohol use disorders than those without an alcohol use disorder.People with alcohol use disorders have been found to be more than 18 times as likely to report non-medical use of prescription medications as people who do not drink. Non-medical use was defined as using a substance not prescribed to them by a doctor, or using drugs in a manner not intended by the prescribing clinician such as to get high.

Mee-Lee D, Shulman GD, Fishman MJ, Gastfriend DR, Miller MM, eds. *The ASAM Criteria: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions.* 3rd ed. Carson City, NV: The Change Companies, 2013.

See attached for more notes.

- Recovery—"a process of sustained action that addresses the biological, psychological, social, and spiritual disturbances inherent in addiction. This effort is in the direction of a consistent pursuit of abstinence, addressing impairment in behavioral control, dealing with cravings, recognizing problems in one's behaviors and interpersonal relationships, and dealing more effectively with emotional responses.

Recovery actions lead to reversal of negative, self-defeating internal processes and behaviors, allowing healing of relationships with self and others. These concepts of humility, acceptance, and surrender are useful in this process.

- Relapse—"a process in which an individual who has established abstinence or sobriety experiences recurrence of signs and symptoms of active addiction, often including resumption of the pathological pursuit of reward and/or relief through the use of substances and other behaviors. When in relapse, there is often disengagement from recovery activities."
- "Relapse can be triggered by exposure to rewarding substances and behaviors, by exposure to environmental cues to use, and by exposure to emotional stressors that trigger heightened activity in brain stress circuits. The event of using or acting out is the latter part of the process, which can be prevented by early intervention."
- Remission—"A state of wellness where there is an abatement of signs and symptoms that characterize active addiction. Many individuals in a state of remission remain actively engaged in the process of recovery. Reduction in signs or symptoms constitutes improvement in a disease state, but remission involved a return to a level of functioning that is free of active symptoms and/or is marked by stability in the chronic signs and symptoms that characterize active addiction."

Mehendale, A.W., Goldman, M.P., Cizerle, K., & Parvin, T.L. (2016). *The Problem of Outcomes in Addiction Treatments, the Inconvenient Truths.* Retreived from http://www.elynsgroup.com/journal/article/the-problem-of-outcomes-in-addiction-treatments-the-inconvenient-truths on July 16, 2018.

- The recovery rates of addiction with traditional 28-30-day treatment are so low…
- In contrast, physicians in the USA enjoy a high success rate
- Following residential treatment physicians enter into very rigorous monitoring programs coupled with contingency contracting and loss of licensure if a chemical relapse occurs.
- State of the art analysis of tissue sample monitoring is the key to the success of the program.
- The collection process for hair, nail, blood, and oral fluids has a major advantage over urine collections (observed, with urine they may misuse their knowledge of pharmacology in an attempt to evade detection of substances of abuse). Urine tests beneficial to "sprinkle in" to detect ultra-short acting substances such as fentanyl.
- Project MATCH research showed that even brief research contact over the telephone appeared to support abstinence.
- All physician programs across the US require 12-step meetings, none mandate use of Vivotrol, and ALL DISCOURGE THE USE OF OTHER MATS SUCH AS BUPRENORPHINE AND METHADONE.
- Reexposure even to small amounts of addicting substances sets a devastating cascade of relapse and associated behaviors.
- On the surface, it may seem acceptable and humane to have harm reduction strategies as outcome measures in addiction. In doing so, however, we are doing a disservice to the patients.
- Once reexposure to an addictive substance occurs, unfortunately, the disease quickly begins to escalate and progress.

- **If subjects, when exposed to reinforcing substances, can control their disease and not deteriorate in a full-blown relapse, they will not qualify for the diagnosis of addiction in the first place. This is a prima facie evidence against using less-than complete abstinence as a primary outcome in addiction.**

Melemis, S. M. (2015). Relapse Prevention and the Five Rules of Recovery. The Yale Journal of Biology and Medicine, 88(3), 325–332.

There are four main ideas to relapse prevention.

1. Relapse is a gradual process with distinct stages.
2. Recovery is a process of personal growth with developmental milestones.
3. The main tools of relapse prevention are cognitive therapy and mind-body relaxation.
4. Most relapse can be explained in terms of a few basic rules.

There are three stages of relapse: emotional relapse, mental relapse, and physical relapse.

Three stages of recovery: abstinence, repair, and growth. Abstinence phase usually starts immediately when the person stops using substances. The tasks of abstinence stage include:

- Accept that you have an addiction
- Practice honesty in life
- Develop coping skills for dealing with cravings
- Become active in self-help groups
- Practice self-care and saying no
- Understand the stages of relapse
- Get rid of friends who are using
- *Understand the dangers of cross addiction*
- Deal with post-acute withdrawal
- Develop healthy alternatives to using
- See yourself as a non-user

Repair: Confront damage caused by addiction with employer, friends, finances, etc.

Growth: The growth stage is about developing skills that individuals may have never learned and that predisposed them to addiction and moving forward.

National Council of State Board of Nursing. (2011). *Substance Use Disorder in Nursing. A Resource Manual & Guidelines for Alternatives & Disciplinary Monitoring Programs.* Retrieved from *https://www.ncsbn.org/SUDN_11.pdf*

Purpose of the manual: provide practical and evidence based guidelines for evaluating, treating, and managing nurses with a substance use disorder.

- "At-risk prescription drug use includes those on mind-altering drugs and pain contracts for greater than three months." (p. 41)
- Nurses who are prescribed potentially addictive medications or impairing medications:
    - "Are a "high risk" population that requires special and ongoing consideration." (p.112)
    - Contracts may look different for this population and require medication-assisted treatment and should also include:
    - minimum five years participation in the alternative program

        - obtaining a current evaluation of co-occurring conditions (e.g., psychiatric or medical disorders as indicated)
        - submit to a neuropsychological or neuropsychiatric evaluation to determine fitness for duty and at any time that cognition appears to be negatively impacted as a result of illness or treatment
        - obtain an assessment by a medical provider approved by the program who has a sub-specialty in addictions and pain management and sign and adhere to a pain management contract
        - engage in treatment with one provider that has expertise in addictions and pain management
        - maintain release of information that allows the provider to communicate directly with alternative program staff
        - Monthly progress reports submitted from the provider
        - provide quarterly prescription profiles
        - Regular verification of prescriptions through prescription profile or state authorized prescription monitoring program, if available (every six months or more as determined by the alternative program)
        - no more than 40 hours per week (or less depending upon provider recommendation)
        - Monthly reports from the nursing employer for first year (can be reduced to quarterly after one year)
        - No access to controlled substances in the workplace for a minimum of 18 months (for participants with a history of diversion, prescription fraud, harm to a patient or multiple prescribers)
        - submit a letter from the provider verifying the participant is safe to practice with a change in his/her medication
        - random weekly drug screening for the first year, three times a month for the second year and two times a month thereafter if fully compliant with all parameters (including practice documentation by the supervisor as safe and appropriate)
        - relapse prevention therapy with a provider who has expertise in pain management, addiction and relapse
        - Compliance with recommendations of providers and evaluators

- "A medication agreement (or contract) reinforces the patient's responsibility as a prerequisite for receiving controlled substance prescriptions and reassures the patient that honoring the agreement will

result in continued provision of adequate amounts of pain medication (Schnoll & Weaver, 2003). However, zero-use or abstinence-based contracts are the best practice." (p.113)

- If a participant is using prescribed or potentially addictive drugs that could cause impairment or that could affect drug screening and therefor the public protection ineffective, then the participant may not be appropriate for the alternative program (non-disciplinary action program/Peer assistance program). Also, coexisiting diagnosis with illnesses known to increase risk of relapse (like chronic pain) the program (monitoring/etc.) may not be the best option to ensure public safety. (p.113)
- 45% of patients who have a history of chronic pain were found to show aberrant medication taking behaviors which were consistent with relapse while on opiates to manage pain. (p.174)
    - "Given the increased potential for relapse in this population, boards of nursing and alternative programs must exercise caution and increased surveillance when determining the appropriateness for acceptance of a participant with a recent active addiction into the alternative program."
- Drug screening cannot be the only tool used to detect relapse for nurses with chronic pain or dual diagnosis and on abusable medications. Behavioral monitoring is recommended included: workplace restrictions and supervision, and regular audits of nurse's workplace access to controlled substances,
- Measures that can be taken if there are any identified practice deficits include:
  1) Frequent random drug screening
  2) Requiring a single prescriber with expertise in both pain management and addictions
  3) Requiring use of a single pharmacy for filling all prescriptions
  4) Periodic review of prescriptions obtained and pharmacy utilized through the state's electronic prescription monitoring program (EPMP) Special Population Guidelines 175
  5) Notification to employer and alternative program of medication changes (including medication tapering)
  6) Relapse prevention therapy
  7) Ongoing frequent attendance in a 12-step program
- Participation in the alternative program for nurses with a substance use disorder must include the following additional requirements:
    - Minimum five-year participation in the alternative program
    - Undergo neuropsychological evaluation prior to a return-to-nursing practice and at any time that cognition appears to be negatively impacted as a result of illness or treatment.
    - Engage in treatment with one provider that has expertise in addictions and
    - pain management maintain a continuous release of information allowing the provider to communicate directly with alternative program staff
    - Monthly progress reports submitted from the provider
    - Utilize one pharmacy and provide name of the pharmacy to the alternative program
    - Provide quarterly prescription profiles and regular verification of prescriptions through the EPMP if available (every six months or more frequently as determined by the alternative program)
    - Direct supervision
    - No night shift

- No shift longer than 12 hours
- No more than 40 hours per week (less, depending upon provider recommendation)
- Monthly reports from the nursing employer for the first year and if no identified issues, quarterly thereafter
- No access to controlled substances in workplace for a minimum of 12 months if there is a history of diversion, prescription fraud or multiple prescribers
- Notification to nursing employer and alternative program staff of any changes to medications, including addition, deletion or change in dose prior to assuming any patient care duties
- Submit a letter from provider confirming safe-to-practice with any changes in medication
- Agreement to immediately cease practice upon notification by the alternative program of noncompliance or other symptoms suggestive or known to be part of a relapse
- Random weekly drug screening during the first year (three times per month the second year, tapering to a minimum of two per month if fully compliant with all parameters and practice documented by supervisor as safe and appropriate)
- Minimum of three times per week attendance in 12-step meeting, aftercare, relapse prevention and nurse support.
- Relapse prevention therapy with the provider (with expertise in pain management, addiction and relapse)

- If Medication Assisted Treatment for opioid addiction is occurring. "The Center for Substance Abuse Treatment (CSAT) consensus panel recommends that medication-assisted treatment for opioid addiction (MAT) as provided in opioid treatment programs (OTPs) be conceptualized in terms of phases of treatment so that interventions are matched to levels of patient progress and intended outcomes." (p. 176)
    - "Individual factors will influence the degree to which neuropathology or changes in the brain exist. The research on the cognitive effects of MAT as applied specifically to the recovering health professional's use is non-existent at this time."
    - Very high doses of both buprenorphine and methadone have the potential to affect cognitive functioning.

Nestler, E.J. & Malenka, R.C. (2004). *The Addicted Brain.* Scientific America. 290, pp. 78-85. doi:10.1038/scientificamerican0304-78

Drugs of abuse connect with various parts in the brain, but all abusable substances directly or indirectly enhance the amount of dopamine signaling in the nucleus accumbens. This is the reward system which is natural inherent in all beings for survival (food, sex, and social interaction). Chronic use of addictive substances can change the behavior of a key part of the brain's reward circuit. Those changes contribute to the tolerance, dependence and craving that fuel repeated drug use and lead to relapses even after long periods of abstention.

American Society of Addiction Medicine. (2011). Public Policy Statement: Definition of Addiction. Retrieved on July 24, 2018 from https://www.asam.org/docs/default-source/public-policy-statements/1definition_of_addiction_long_4-11.pdf?sfvrsn=a8f64512_4.

Alcohol, nicotine, other drugs and pathological gambling behaviors exert their initial effects by acting on the same reward circuitry that appears in the brain to make food and sex, for example, profoundly reinforcing. After periods of abstinence, relapse can be triggered by exposure to rewarding substances. It can also be triggered by exposure to environmental cues to use and by exposure to emotional stressors that trigger heightened activity in brain stress circuits.

Peters, E.N., Hughes, J.R. (2010). *Daily Marijuana Users with Past Alcohol Problems Increase Alcohol Consumption During Marijuana Abstinence.* Drug and Alcohol Dependence. doi https://doi.org/10.1016/j.drugalcdep.2009.07.027.

Drug abuse treatment programs typically recommend complete abstinence because of a fear that clients who stop use of one drug will substitute another. A within-subjects study investigated whether consumption of alcohol and other substances changes during marijuana abstinence. They saw an increases in marijuana withdrawal discomfort scores and alcohol craving scores from baseline to marijuana abstinence significantly and positively correlated with increases in alcohol use. Increases in cigarettes, caffeine, and non-marijuana illicit drugs did not occur. This study provides empirical validation of drug substitution in a subgroup of daily marijuana users, but results need to be replicated in individuals who seek treatment for marijuana problems.

Seller, E. M., & Tomkins, D. M. (2001). *Addiction and the brain: The Role of Neurotransmitters in the Cause and Treatment of Drug Dependence.* CMAJ, 164(6), 817-821. Retrieved on July 29, 2018 from http://www.cmaj.ca/content/164/6/817.full.

Neurotransmitters play a major role in addiction and the development of addiction, including substance dependence. All substances and chemicals that humans misuse and abuse may be diverse in their chemical compound and the neurotransmitters they affect; however, all substances misused modulate the brains rewards system. Addiction/Substance Dependence affects the specific neural circuits with in the brain that are involved in regulation of the reward process in the brain. Substances cause long-term and often permanent changes in the brain. All substances are able to modulate the brains reward system and pathways either by influencing the action of dopamine in the system or by altering the activity of other neurotransmitters that exert a altering influence over this mesolimbic dopaminergic pathway. Drugs of abuse are able to exert influence over the brain reward pathway either by directly influencing the action of dopamine within the system, or by altering the activity of other neurotransmitters that exert a modulatory influence over this mesolimbic dopaminergic pathway. (GABA), opioid, serotonergic, cholinergic and noradrenergic neurotransmitter pathways have all been shown to interact at various points along the mesolimbic dopaminergic pathway and to modulate its activity. If someone is in recovery for addiction to alcohol, their brain reward system has already been altered. With this evidence it would appear they could be at higher risk to misuse other substances as well given the alterations already made to their brain reward system.

Seppala, M.D. & Oreskovich, M.R. (2012). *Opioid-Abusing Health Care Professionals: Options for Treatment and Returning to Work After Treatment.* 2012 Mar; 87(3): 213–215. Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3498284/

- -Addresses cognitive deficits associated with Buprenorphine use
- -Has potential to undermine cognitive functioning in a safety-sensitive clinical setting
- -Can be abused
- -It has been our experience in working in the physician health field for several years that hospitals and clinics are extremely concerned that HCPs who take potentially impairing medications, even when appropriately prescribed, constitute increased risk and liability for these institutions.
- -Has potentially intoxicating effects
- -A large treatment center (P. Earley, MD, and M. Oreskovich, MD, oral communication, December 2011) and a large PHP (P. Earley, MD, and M. Oreskovich, MD, oral communication, December 2011) have demonstrated a significant reduction in relapse when opioid-dependent HCPs receive monthly injections of depot naltrexone, an opioid antagonist drug that lacks the potentially intoxicating effects of buprenorphine. Routine use of this medication may negate the need or indication for buprenorphine maintenance among HCPs.

Schoedel, K.A., McMorn, S., et. al. (2010). *Reduced Cognitive and Psychomotor Impairment with Extended-Release Oxymorphone Versus Controlled-Release Oxycodone.* Pain Physician Journal. (13) p. 561-573. Retrieved from file:///C:/Users/Folks%20Fire%20Alarm%20Inc/Downloads/20103B133B561-573.pdf.

The study found poorer cognitive and psychomotor performance increased sedation, dizziness, and drowsiness with a single dose of OC-CR. (Oxycodone Controlled Release). OM-ER (Oxymorphone Extended Release. Greater sedation and cognitive impairment with equianalgesic doses of OC-CR. Walsh and colleagues (24) reported that hydromorphone was only modestly more potent than hydrocodone and oxycodone with regard to subjective and psychomotor effects. This exploratory study found single intact oral doses of 30 and 60 mg OC-CR produced significant cognitive and psychomotor impairment plus sedation, drowsiness, dizziness, and dysphoria.

***Stein, R.A., Strickland, T.L. (1998). A Review of the Neuropsychological Effects of Commonly Used Prescription Medications.* Archives of Clinical Neuropsychology. 13 (3) p. 259-284. Retrieved from https://www.sciencedirect.com/science/article/pii/S0887617797000279.**

Study reviews impairment levels of many substances including the ones listed below.

- *Anxiolytics/Benzodiazepines:*
    - Early clinical reports suggested that benzodiazepines could adversely affect memory.
    - Benzodiazepines exhibit dose-dependent persisting memory impairment and predominantly sedation-dependent psychomotor effects, which diminished with tolerance to the sedative effect. Impaired vigilance does not appear to be explained simply by sedation, and tolerance is commonly not substantial.
- *Atypical Anxiolytics (Buspirone):*

    - Buspirone appears to be largely devoid of adverse neuropsychological impairment as determined by both a broad range of standardized cognitive tests and by assessment of adaptive functioning (i.e., driving).
- *Stimulants:*
    - "Stimulants such as methylphenidate, pemoline, and dextroamphetamine can have positive effects on vigilance and memory. The highest rate of responders is in the ADHD population, though significant benefits have been found for acute brain injury. Under ideal conditions, each patient would be administered at least two doses of medication and placebo under blinded and controlled conditions due to the individual variability in responses and nonlinear dose-response curves. There is insufficient evidence on most other stimulant medications. Yet the neuropsychologist should be aware that they may have significant impacts, both positive and negative. Finally, abusive and chronic high-dose stimulant intake may lead to impaired cerebrovascular functioning, such that attention, memory, and processing speed may actually be impaired."
- *Antiepileptics:*
    - "Phenobarbital produces the greatest negative neuropsychological effects (psychomotor, memory, attention/concentration and general intelligence) among the AED's. Phenytoin has a generally smaller effect but significant sedative- and dose-dependent motor speed and accuracy and memory effects persist. Withdrawal of phenobarbital and, to a lesser extent, phenytoin generally produce significant improvement. The effects of frequently significant psychomotor slowing on a range of test performances must be considered. Carbamazepine and, probably, valproic acid have the smallest adverse effects, likely relating to low sedative properties."
- *Antihistamines:*
    - "Older sedating antihistamines yield significant psychomotor, attentional and, to a lesser extent, memory performance decrements that are associated with impairment in daily activities such as driving and operation of dangerous equipment."
- Total Summary:
    - "TCAs are of most concern within the antidepressant class with acute psychomotor and concentration effects and persisting anti-cholinergic-associated memory impairment. SSRIs are relatively safer, but not without adverse effects. Both SSRIs and MAOIs are in need of more definitive study. Antihypertensives generally produce moderate to no significant cognitive effects, but this is an area clearly in need of further study with particular attention to the effects of cerebrovascular compromise and potentially positive effects of blood pressure control. ACE inhibitors and beta-blockers may produce a positive influence on psychomotor functioning with potential for a small but significant impact on memory. Seizure patients administered antiepileptics appear to benefit from seizure control, but phenobarbital typically overcomes any potential benefit with heavy sedation and negative effects on a wide range of functioning."

Substance Abuse and Mental Health Services Administration (SAMSHA). (2017). *Managing Chronic Pain in Adults with or in Recovery from Substance Use Disorders.*

Cross-Addiction, addiction to one substance can be linked with addiction to other substances. Individuals with chronic pain and histories of substance use disorder may be at increased risk of cross-addiction to any medication that acts on the brain as a reinforcing agent. Treating patients in recovery for chronic pain should include:

- Treatment with non-opioid medications. (Acetaminophen, Nonsteroidal anti-inflammatory drugs (NSAIDS), Adjuvant medication originally developed for other purposed but have analgesic properties for certain conditions.
- Recommendation/prescription for non-pharmacological therapies.
- Treat comorbidities.
- Assess treatment outcomes.
- Initiate opioid therapy only if the potential benefits outweigh risk and only for as long as it is unequivocally beneficial to the patient.

Benzodiazepines are not recommended for the treatment of chronic (non-cancer) pain for people who have a comorbid substance use issues. Unless for very short-term, closely supervised treatment of acute anxiety states. Smoked marijuana is not recommended for treatment either.

Talbott Recovery Campus. *Talbott Medication Guide for a Safe Recovery.* (2014) Retrieved from https://talbottcampus.com/wp-content/uploads/talbott-medication-guide-and-legal-drug-information-2014-06.pdf.

Talbott medication guide was created by Dr. Paul Earley and recently expanded on by Bruce Merkin, M.D., Renee Enstrom, Nicholas Link and the staff at Glenbeigh hospital. The guide states, “Opioids bind to opiate receptors in the central nervous system causing inhibition of ascending pain pathways and altering the perception of and response to pain. Generalized central nervous system depression is also produced. Tolerance or drug dependence may result from extended use. Buprenorphine binds to mu receptors in the brain leading to a suppression of withdrawal and cravings but also feeling of euphoria.” Per the Talbot guide, Oxycontin, Soma with Codeine, Suboxone, Etc. are to “absolutely be avoided”. Only under very unusual conditions can Class A drugs be taken by a recovering addict or alcoholic, and only when given by a physician or dentist and with the consent of the addiction medicine physician that follows your care. These exceptional circumstances can include severe illness and injuries, including major surgery, car accidents and other trauma, and tests or procedures that can only be done under sedation or anesthesia.”

U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health. Washington, DC: HHS, November 2016.

- “Addiction is a chronic disease of the brain, and we need to treat it with the same urgency and compassion that we do any other illness.”
- List of substances discussed in the Report

- First, many people use and misuse these substances… (Intro, pages 1-5)
- Second, individuals can use these substances in a manner that causes harm to the user or those around them. Misuse can be of low severity and temporary, but it can also result in serious, enduring, and costly consequences…
- Third, prolonged, repeated misuse of any of these substances can produce changes to the brain that can lead to a substance use disorder, an independent illness that significantly impairs health and function and may require specialty treatment.
- "The treatment plan and goals should be person-centered and include strength-based approaches, or ones that draw upon an individual's strengths, resources, potential, and ability to recover, to keep the patient engaged in care."(p 4-16 Individualized Treatment Planning)
- Recovery Support Services—provide ongoing support after treatment. Specific support includes "help with navigating systems of care, removing barriers to recovery, staying engaged in the recovery process, and providing a social context for individuals to engage in community living without substance use. RSS can be effective in promoting healthy lifestyle techniques to increase resilience skills, reduce the risk of relapse, and help those affected by substance use disorders achieve and maintain sobriety." (p 4-31)
- "Individuals who participate in substance use disorder treatment and RSS typically have better long-term recovery outcomes that individuals who receive either alone. Further, active recovery and social supports, both during and following treatment, are important in maintaining recovery." (p 4-31)
- Recovery Definitions: The word "recovery" is used to mean a range of different things. Various recovery definitions are consistent in that they describe personal changes that are well beyond simply stopping substance use. Conceptually broader than "abstinence" or "remission." The Betty Ford Institute Consensus Panel defined recovery as "a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship." SAMHSA defines recovery as "a process of change through which individuals improve their health and wellness, life a self-directed life, and strive to reach their full potential." (p 5-2 and 3)
- Telephone Case Monitoring: "In a randomized clinical trial, patients receiving telephone case monitoring were half as likely as those not receiving it to drink heaving at 3-year follow-up." "Telephone monitoring produced the highest rates of abstinence from alcohol at follow-up 12 months later. Furthermore, at 24 months, participants who received telephone monitoring continued to have significantly higher rates of total abstinence than those in standard care."

What Is Relapse? (2017, August 17). Retrieved July 19, 2018, from https://easyread.drugabuse.gov/content/what-relapse

Relapse is common and normal and happens to a lot of people recovering from drug addiction. People will have one or more relapses along their recovery journey because it takes practice to learn how to live without drugs. While relapse is a normal part of recovery, for some drugs, a relapse can be dangerous and/or deadly. If a person uses as much as they used to before quitting, they can easily overdose because their bodies are no longer used to having the same amount of drugs in their system. An overdose happens when the person uses too much of a drug and has a very bad reaction that results in serious, harmful symptoms or death.

White, W. & Cloud, W. (2008). Recovery capital: A primer for addictions professionals. Counselor, 9(5), 22-27.

- "Recovery capital (RC) is the breadth and depth of internal and external resources that can be drawn upon to initiate and sustain recovery from severe AOD problems." P.1
- "Recovery capital is conceptually linked to natural recovery, solution-focused therapy, strengths-based case management, resilience and protective factors, and the ideas of hardiness, wellness, and global health." P2
- Three types of recovery capital: personal, family/social, and community
    - Personal—physical health, financial assets, health insurance, safe and recovery-conducive shelter, clothing, food, and access to transportation. Human recovery capital includes a client's values, knowledge, education/vocational skills and efficacy, hopefulness/optimism, perception of one's past/present/future, sense of meaning and purpose in life, and interpersonal skills.
    - Family/Social—intimate relationships, family and kinship relationships, and social relationships that are supportive of recovery efforts. Indicated by the willingness of intimate partners and family members to participate in treatment, the presence of others in recovery within the family and social network, access to sober outlets for sobriety-based fellowship/leisure, and relational connections to conventional institutions (school, workplace, church, etc) p2
    - Community—community attitudes/policies/resources related to addiction and recovery that promote resolution of alcohol and other drug problems. Includes active efforts to reduce addiction/recovery-related stigma p2
- Cultural capital is a form of community capital. Local availability of culturally prescribed pathways of recovery that resonate with particular individuals and their families.
- Recovery capital plays a major role in determining the success or failure of natural and assisted recovery p3
- Long-term recovery outcomes for those with the most severe AOD problems may have more to do with family and community recovery capital than the attributes of individuals or a particular protocol p4
- Strategies that target family and community recovery capital can elevate long-term recovery outcomes as well as elevate the quality of life of individuals and families in long-term recovery p4
- Use changes in levels of recovery capital to evaluate your program and your own professional performance—help build community recovery capital beyond their own service programs.