1) Definitions Spectrum of severity: use → misuse → abuse → dependence

Misuse: sporadic use without adverse consequences &/or unintentional
SUD: frequency of consumption may vary; use leads to adverse consequences (health issues or problems at work, school or home)

Addiction’s 4Cs: Loss of control over substance use WITH craving &/or compulsive use which is continued despite harm.

Dependence, physical: a state of adaptation resulting in drug class-specific withdrawal symptoms upon abrupt dose reduction, decreasing drug levels or antagonist administration.

Detoxification-managing acute withdrawal: treatment to remove the physiological effects of the addictive substances (protocols).

- Social Detox: managed & engaged in recovery; 3-10 day stay.
- Brief Detox: ~24 hour observation; not medically & medically

Harm Reduction: measures to adverse health, social, economic consequences of SUD, to individuals, families & communities without necessarily requiring abstinence or cessation of drug use

Tolerance: the effect of a drug over time, or (dose) required for effect

Tolerance & physical dependence should not be confused with addiction. Addiction is characterized by compulsive use of a substance or preoccupation with obtaining it despite evidence that continued use causes harm (physical, emotional, social, economic).²

2) Statistics from the Literature (CTADS 2017; CADUMS 2011/12)³

- Prevalence, past 1yr: any tobacco (18%), e-cigarette (3%); illegal drugs (3%), cocaine (2%), ecstasy (1%), hallucinogens (1%); problematic psychoactive use to get high or other (i.e. opioid, stimulant, tranquilizers & sedatives, 5%).
- The rate of drug use: cocaine or crack, speed, ecstasy, hallucinogens (including valium or heroin) by youth 15-24 yrs is much higher (6.5%) than reported by adults ≥25 yrs (1.2%).
- 72% of non-medical opioids used by students were obtained from home.⁴
- The prevalence of harm 4x higher among youth aged 15 to 24 yrs (5.5%) than adults aged 25 yrs (1.4%).⁴

(harm related to social life, health, work, studies, employment, financial, legal, housing, learning.)

- 10% report drugs/alcohol as reason for 1st ever sexual intercourse.⁵

3) Principles of SUD Treatment

1) No single tx is appropriate for all; concomitant medications are useful for many; tx needs to be readily available

2) For success, attend to multiple needs, not just drug use

3) Assess for medical, family, vocational, social & legal services

4) Ensure adequate time in treatment (≥3 months)

5) Arrange for counselling & behavioural tx

6) Integrate tx for those with mental disorders

7) Acute detoxification is only the 1st stage of tx

8) Tx does not need to be voluntary to be effective

9) Drug & alcohol use monitoring should be ongoing

10) Assess for HIV/AIDS, HBV, HCV, etc. & provide counselling regarding risk behaviours (sexual contacts, drug use, etc.)

11) Expect a long-term process with relapses

12) Individualize “self-help” & spiritual adjunct support programs

4) SUD Screening: CAGE-AID, AUDIT, Other e.g. SASSI⁶

C – Have you ever felt a need to Cut down or Change your drinking/drug use?
A – Do you get Annoyed when others criticize your drinking/drug use?
G – Have you ever felt Guilty about your drinking/drug use for any reason?
E – Eye-opener: Have you ever felt the need for a drink/drug use early in the morning to steady nerves, decrease hangover or withdrawal?

When assessing a patient’s answers to the above questions: one YES suggests caution; ≥2 YES suggests strong caution/need for vigilance.

AUDIT: questions to assess alcohol use⁷

<table>
<thead>
<tr>
<th>1) How often do you have 1 drink containing alcohol?</th>
<th>Never</th>
<th>1-2/mo</th>
<th>2-4/mo</th>
<th>4/mo or more</th>
<th>8+ /mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) How many drinks do you have on a typical day?</td>
<td>1-2</td>
<td>3-4</td>
<td>5-8</td>
<td>9-10</td>
<td>11+</td>
</tr>
<tr>
<td>3) How often do you have 4+ drinks on one occasion?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>4) How often were you not able to stop drinking?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>5) How often did you feel you did too much was expected?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>6) How often did you have a needed a drink in the morning?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>7) How often did you have a feeling of guilt after drinking?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>8) How often did you not remembered the past?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>9) Have you ever been a dependent result of drinking?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
<tr>
<td>10) Has a relative, friend or doctor been concerned about your drinking?</td>
<td>Never</td>
<td>&lt;1/mo</td>
<td>1/mo</td>
<td>2-3/mo</td>
<td>4/mo or more</td>
</tr>
</tbody>
</table>

Total score: 0-7=low risk; 8-15=moderate risk; 16+ Likely problems

Single Question Screen: How many times in the past year have you used an illegal drug or prescription med for nonmedical reasons?

5) Physical findings: intoxication, withdrawal, other:

- Evidence of associated infections, hepatitis, HIV, oral thrush
- Needle marks
- Evidence of associated infections, hepatitis, HIV, oral thrush
- Physical findings
- Mental findings
- Medical findings

6) Adopting a Continuum of Care Approach for Substance Use Disorders⁸

7) Harm Reduction

8) A SUD is a chronic disease. Patients with a SUD will require acute & ongoing intervention. A continuum of care approach supports patients in accessing various levels & intensities of care over time. An effective team approach is often the critical factor toward a successful outcome.

Best Practices (Adapted)³³

1) Individual experiencing harm should determine ultimate goal of treatment (e.g. safer use, abstinence, etc.) with input from provider

2) Determine treatment plan together and offer stepped care with least intensive services first

3) Assess, address, coordinate all well-being components

4) Ensure services are culturally, trauma & gender informed

5) Reduce stigma to overcome major recovery barriers

6) Peer-engaged and peer-led services help with trust

7) Enhance outcomes by being recovery-oriented

Harm Reduction Measures

1) Address risks for other diseases (e.g. HIV, Hep C, syphilis)¹⁴

a) screening, b) needle distribution & exchange programs, c) vaccinations, d) counselling regarding risky behaviours, e) safer smoking options, f) referral, g) oral hygiene

2) Educate regarding stopping overdose (including recommending take-home naloxone)

3) Inform re supervised consumption services when available

A non-judgmental attitude is a key for success!

Urine Drug Screening (UDS): to monitor medication compliance & identify/manage SUD risks

- Immunoassay: rapid, inexpensive & preferred for initial screening. Chromatography: 5 yrs, delay but high accuracy
- Amphetamines: detectable 2-3 days, Benzos: 3 days for short acting, Oxides: 1-3 days;
- THC: 3 days if single use, ~15days if daily use, 60+ days if long-term/heavy use; False negatives possible
- Assess drug use for causes other than SUD. Ensure proper collection technique & integrity of specimen
- Goal is to improve patient care & communication, NOT to police!!! Discuss unexpected results with patient
- If abuse risk is high, advise of consequences, tighten boundaries, reffer to addiction specialist/DC/DIf necessary

Life worth living, without using!
SUBSTANCE USE DISORDER (SUD)/ADDITION: Overview & Treatment Considerations

**Cannabis**
- THC (delta-9-tetrahydrocannabinol)
- CBD (cannabidiol)

**Hashish**
- hash, hemp, marijuana
- dried hemp, drug, joints, pot weed

**Club Drugs**
- mescaline, benzocaine, sugar, talc
- ketamine, PMMA, PCP

**Amphetamines**
- 3,4-methylenedioxymethamphetamine (MDMA)
- ecstasy, E=XX, XTC

**Benzodiazepines**
- alprazolam, diazepam, clonazepam

**Opioids**
- Demerol, morphine
- Baclofen
- Codeine

**Antidepressants**
- fluoxetine, sertraline, paroxetine

**Depression & Anxiety**
- DEXEDRINE, Adderall, Ritalin

**Other**
- Barbiturates, benzodiazepines, amphetamines

**Withdrawal Symptoms**
- increased heart rate, blood pressure, respiratory rate
- tremors, diaphoresis, insomnia

**Management & Treatment Options**
- Abrupt withdrawal is the most common method
- Antidepressants: fluoxetine, sertraline, paroxetine

**Dependence**
- tolerance
- physical dependence

**Risk Factors**
- genetic predisposition
- environmental factors

**Signs/Symptoms, Overuse & Health Concerns**
- euphoria
- impaired learning & reaction time
- confusion, panic
- hallucinations
- respiratory distress
- seizures

**Other**
- dextromethorphan
- lyrica
- gabapentin

**Cocaine**
- IV use
- nasal use

**Alcohol**
- withdrawal
- drowsy
- confusion
- delirium

**Heroin**
- withdrawal
- drowsy
- confusion
- delirium

**Baclofen**
- muscle relaxant

**Flunitrazepam**
- sedative

**Depression**
- cognitive deficits
- suicidal ideation

**Anxiety**
- tremors
- palpitations
- restlessness

**Detox**
- rapid
- controlled

**Principles/Contraindications**
- alcohol
- benzodiazepines
- opioids

**Adverse Effects**
- respiratory depression

**Management**
- monitoring
- supportive care

**Drug Interactions**
- antidepressants
- antidepressants
- benzodiazepines
- opioids

**Immunosuppressants/Antineoplastics**
- corticosteroids
- immunosuppressants

**Pregnancy**
- Club Drugs (MDMA, Ritalin, Hepatitis C, Benzodiazepines, cannabis, alcohol)

**Cannabis**
- THC (delta-9-tetrahydrocannabinol)
- CBD (cannabidiol)

**Hashish**
- hash, hemp, marijuana
- dried hemp, drug, joints, pot weed

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**Immunosuppressants/Antineoplastics**
- corticosteroids
- immunosuppressants

**Pregnancy**
- Club Drugs (MDMA, Ritalin, Hepatitis C, Benzodiazepines, cannabis, alcohol)
**Management Of Substance Abuse In Emergency**

**Aim:**
- ↓ morbidity & mortality; ↓ risk of relapse; consider plan short & long term

**Assessment & Management issues:**
- **Infections:** soft tissue; other (endocarditis, HIV, hepatitis, etc.)
- **Over-dose vs Intoxication vs Withdrawal vs Other**
  - (Other e.g. subdural hematoma from fight, stroke, infectious component)
- **Consider detailed assessment if:**
  - o Acknowledgement of drug use
  - o Physical signs e.g. track marks, nasal septum atrophy
  - o Urine drug screen +ve (Note: emergency drug screen is unlikely to significantly affect impact upon management in the ER).

**Approach for engagement**
- o Accept patient autonomy
- o Non-judgemental approach
- o Collaborative approach with patient
- o Confidentiality
- o Proactive discussion on meds and behaviours

**Managing Potentially Violent Patients:**
- o Have a staff & public safety plan!
- o Maintain autonomy & dignity of users, intervene early, approach patients with caution, don’t startle, avoid provocation, be aware of your own demeanour, use calm language, don’t make promises, provide options and choice, remove dangerous objects from your person, know exits, don’t turn back on patient, role for distraction, be firm & compassionate, depersonalize issue; avoid confronting, but if necessary maintain distance, avoid corners/ cornering, explain intention, ask for facts & encourage reasoning, ask for weapons to be put down not handed over, know how to call for help.

**Intoxication: Common Presentations – Possible Causes**

**Unresponsive:** hypoglycemics, narcotics, alcohol, cyanide, carbon monoxide, tranquillizers, hydrocarbons, barbiturates

**Seizures:** hypoglycemics, amphetamines, cocaine, hallucinogens, anticonvulsants, TCAs, PCP, mescaline; benzodiazepine withdrawal especially high dose; alcohol withdrawal tremors/seizures

**Hypothermia:** salicylates, Ecstasy, atropine, amphotericin B, phenytoin

**Hypothyroidism:** ethanol, narcotics, sedatives/hypnotics, TCAs, barbiturates, carbon monoxide.

**If mixed presentation consider possibility of mixed ingestion!**

**Intoxication Management**

- **Primary assessment ABCs:** airway, breathing, circulation

<table>
<thead>
<tr>
<th>Opioids</th>
<th>Intoxication (coma, lethargy, stupor; constipation, N&amp;V; flushing, pruritis; hypotension; miosis; resp depression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>supportive tx; regular assessment of cardiac/respiratory safety</td>
</tr>
<tr>
<td>HR</td>
<td>airway protection; correction of hypoxia</td>
</tr>
<tr>
<td>RR</td>
<td>naloxone option: short term duration; balance reversal of resp depression with opioid withdrawal</td>
</tr>
<tr>
<td>Temp</td>
<td>naloxone can be considered if opioid toxicity suspected.</td>
</tr>
<tr>
<td>pupillae</td>
<td>consider type of opioid for duration of risk &amp; naloxone effect</td>
</tr>
<tr>
<td>Diaphoresis</td>
<td>with nacetyl-acylaaminophenol if overdose cause unknown (rio acetylaminophenol as possible agent).</td>
</tr>
<tr>
<td>Temp</td>
<td>CAUTION: depending on timing, a “non-toxic” level can become toxic; consult poison centre</td>
</tr>
</tbody>
</table>

| Stimulant | Supportive tx (agitation, diaphoresis, hypotension, hypothermia, mydriasis, psychosis, seizures, 
| Temp    | ↓ố HR)                                                                                                     |
| RR      | - oral diazepam or lorazepam for agitation & hypotension + ec cocaine induced                                |
| pupillae| - IV lorazepam, diazepam or midazolam short acting if severe agitation/ anxiety                              |
| Diaphoresis | optional (if predominant psychosis): sedating antipsychotic (e.g. olanzapine, risperdone, quetiapine)     |
| Temp    | Avoid mixing benzodiazepine & antipsychotic if possible due to risk of oversedation & respiratory AE         |
| pupillae| Monitor: hyperthermia, hypotension, cardiac, electrolytes                                                   |
| Diaphoresis | HTN: benzodiazepines; alternatively nitrouspride, NTG                                                     |
|         | o - α-blockers. (general avoid β-blockers as will result in unopposed α constiction)                       |

See also **Stimulant Use Disorder Chart**

| Alcohol | Supportive tx (immediate life-threatening complications in kids are respiratory depression & hypoglycaemia) |
|         | - airway; + IV access (fluid management); correct hypoglycaemia; n-acetyl Ernestine; electrolytes; tiamine |

**Medications:** may be an option in life threatening intoxication. Hemodialysis may be useful to remove barbiturates, sedatives, hypnotics, anticonvulsants, alcohols, analgesics, solvents, etc.

**When to Discharge?**
- Consider time from last ingestion. Can they walk unaided?

**When to let them leave the emerg?**
- Consider holding till they can walk out unassisted.

**Management of Co-caine Body Packers**
- Hx: # & type of packets; other agents; GI symptoms; Investigations: ECG, CBC/SCR, etc., chest & abdomen x-rays; Management if asymptomatic: admit, oral gastric lavage till all packets passed; 4 h observations of vitals after packet passed; light/normal diet, IV access, daily evaluation for intoxication/bowel obstruction.

**Intoxication: Toxic Syndromes or “toxidromes”, see Goldfrank’s Toxicologic Emergencies**

**Extras (RxFiles - Substance Abuse)**
- o If using cocaine other stimulants then detox is the only option. Rapid detox is not recommended during pregnancy.
- o Patients should only be “nodding” (falling asleep on methadone) if the dose is too high, they are a new start, or if they using BZD’s at the same time – may consider a tox screen to assess if patient is also using any other drugs.
- o In Saskatoon methadone does go up by 10mg increments and down by 5mg increments for dose adjustments with some physicians.
- o Using both oral LA morphine (Kadian) in addition to methadone when starting patients is sometime done to prevent acute withdrawal & allow for methadone titration (e.g. a few weeks of dual treatment); controversial.
- o IV drug abusers: considerations see reference
- o Other substances of abuse: volatile inhalants, Listerine mouthwash
- o Be weary of illegitimate on-line pharmacies which supply controlled substances without a prescription.

**Acute Alcohol Intoxication**
- Blood Alcohol Levels (BAL) <50mg/dL (<10.9mmol/L) impairment in skills, ↑ talkativeness, relax; >100 mg/dL impaired judgement, ↓ coordination & reactions, mood/personality change; >200 mg/dL: amnesia, delirio, N&V: 300-500 mg/dL ↓ risk of respiratory depression, coma & death
- DSM-IV: A) recent EtOH, B) clinically significant behavioural/psychological change e.g. aggression, mood, impairment, C) one or more of ↑ slurred speech, ↓ coordination, 3. unsteady gait, 4. nystagmus, 5. ↓ attention/memory, 6. stupor/coma, other.
- Other effects & associations: Respiratory, GI, alcoholic hepatitis. ↑ risk of injury, ↑ risk of life years lost, ↑ violent crimes.
- When to let them leave the emerg? Consider holding till they can walk out unassisted.

**Lifespan Spectrum of Complications**
- Pregnancy - obstetrical complications, fetal distress, stillbirth, low birth weight; adolescent & young adult – self inflicted injuries, homicides, premature morbidity; Later life - ↑ decline.
- Substance Abuse in Older Adults: 2005 USA data on treatment programs: Alcohol only (48%), alcohol + 2nd illicit substance (52%); 2nd substance cocaine 40%, marijuana 22%, opiates 16%, stimulants 5%, other 10%.
- Signs: headache, ↓ cognitive/memory ability; Unique features: tendency to drink smaller quantities more often, Di with ↑ metabolism of other drugs, ↓ in sleep patterns. Clues: recent losses, psych hx, family hx of abuse.

**Acknowledgements:** We would like to thank those who contributed to the development, review for this chart. SHR Addictions: Christy Becker, Terry Patzer, Dr. Peter But (FM), Dr. Kevin Kok (Psychiatry), Dr. Morris Markentin (FM, Saskatoon). Dr. Brian Fern, Other: Dr. Amy Semaka (PharmD, Edmonton), Dr. M. Varenbut (Toronto), Dr. J. Witt (Emerg, Saskatoon), Dr. R Hartmann (Emerg), Wendy Pecho (Prince Albert) and the RxFiles Advisory Committee.

Prepared by Loren Regier BSP BA, Brent Jensen BSP
UK Study Ranking - most harmful drugs: overall, to individual and to society.

- BACKGROUND: Proper assessment of the harms caused by the misuse of drugs can inform policy makers in health, policing, and social care. We aimed to apply multicriteria decision analysis (MCDA) modelling to a range of drug harms in the UK. METHODS: Members of the Independent Scientific Committee on Drugs, including two invited specialists, met in a 1-day interactive workshop to score 20 drugs on 15 criteria: nine related to the harms that a drug produces in the individual and seven to the harms to others. Drugs were scored out of 100 points, and the criteria were weighted to indicate their relative importance. FINDINGS: MCDA modelling showed that heroin, crack cocaine, and metamfetamine were the most harmful drugs to individuals (part scores 34, 37, and 32, respectively), whereas alcohol, heroin, and crack cocaine were the most harmful to others (46, 21, and 17, respectively). Overall, alcohol was the most harmful drug (overall harm score 72, with heroin (55) and crack cocaine (54) in second and third places. INTERPRETATION: These findings lend support to previous work assessing drug harms, and show how the improved scoring and weighting approach of MCDA increases the differentiation between the most and least harmful drugs. However, the findings correlate poorly with present UK drug classification, which is not based simply on considerations of harm. FUNDING: Centre for Crime and Justice Studies (UK).

Salvia leaves (magic mint, diviner's sage, sally D, purple sticky)

- Member of mint family, smoked or chewed. Contains salvinorin A, a selective kappa opioid receptor antagonist; does not bind to 5HT1A receptors like other hallucinogens. Halucinogen effects rapid & last <30min. SE: dizziness, disorientation, headache, chest pain.

Angel’s Trumpet: (Angel’s tears, Apple of Peru, Green Dragon, Devil’s trumpet)

- Alkaloid (atropine, scopolamine) containing flowers & stem. Each flower contains 0.2mg atropine & 0.65mg scopolamine; 3-6 flowers causes hallucinations; 9+ flowers can be life-threatening. Commonly ingested by making a tea. Effects in 1-4hrs; duration 24hrs.

‘Bath Salts’ PABS for abuse: are actually designer stimulants

- Common in UK, now USA via New Orleans, India, China.

Spice – ("legal highs"): a range of synthetic drugs; combusted vegetable material sprayed with a variety of chemicals, each slightly different; often mixed with tobacco & smoke (e.g., Angel’s tears, magic mint, Devil’s Trumpet).

Dimethoxybenzeneethanamine (2-CB) – (note 2-CB is a misnomer) a synthetic hallucinogen & club drug; sometimes sold as ecstasy, often mixed in Prince Albert SK, Feb 2017.

Poppers – volatile alkyl nitrite compounds inhaled for enhanced sexual experience; AE: foveal maculopathy (vision disturbance).

Kratom – herbal product; opioid agonist properties; mostly obtained as a powder and consumed as a beverage; doses >15g may produce opioid like toxicity; severe adverse events, including death, have been reported; naloxone may be given (if drowsy/respiratory depression).

Oxymorphone OPANA ER Abuse

- Thrombotic thrombocytopenic purpura (TPP) strongly associated with injection drug abuse of OPANA ER.

Buprenorphine/naloxone (ZUBSOLVE), 1.4mg/0.36mg – new SL tab formulation (available in USA); bioavailability & may taste better than Suboxone. (Achieves plasma concentrations = 2/0.5mg and 8/2mg strengths of other Bra)

Methadone

- Full agonists of CB1 & therefore potential for overdose & toxicity
- Association with seeking medical attention. AES: agitation, altered time perception, anxiety, dysphoria, TBP, listlessness, hallucinations/psychosis, nausea, paranoia, seizures, tachycardia.

Marijuana extraction/concentration production of very highly concentrated levels (80-90%) called “Shatter”; easily over consumed resulting in overdose / emergency visits

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SK Helath Links:

www.saskatchewan.ca/addictions; the target audience is the public.

Here are the direct links re Crystal Meth:


Additional refs for SUBSTANCE ABUSE/ADDICTION Overview & Treatment Considerations:
A voice from the streets about Spice. BMJ. 2016 Jun 30;355:i3748.
Achar S, Rostaman A, Narayan SM. Cardiac and metabolic effects of anaobic-androgenic steroid abuse on lipids, blood pressure, left ventricular dimensions, and rhythm. Am J Cardiol. 2010 Sep 15;106(6A):893-901.


CDC Centers for Disease Control and Prevention. Emergency department visits involving nonmedical use of prescription opioids - United States, 2004-2008. MMWR Morb Mortal Wkly Rep. 2010 Jun 18;59(23):705-9. This report describes the results of that review, which showed that the estimated number of ED visits for nonmedical use of opioid analgesics increased 111% from 2004-2008 (from 144,600 to 305,900 visits) and increased 29% from 2007-2008. The highest numbers of ED visits were recorded for oxycodone, hydrocodone, and methadone, all of which showed statistically significant increases during the 5-year period. The estimated number of ED visits involving nonmedical use of opioids increased 89% from 2004-2008 (from 143,000 to 271,700 visits) and decreased 24% from 2007-2008.


preventing any exploration of differences related to this variable. Considered as sex a factor influencing response to withdrawal treatment would be a sign of

Methadone was associated with fewer adverse effects than clonidine, a b-adrenergic agonist for the management of opioid withdrawal. Cochrane Database Syst Rev. 2016 Mar 5;(3):CD002024. Clonidine and lofexidine are more effective than placebo for the management of withdrawal from heroin or methadone. We detected no significant difference in efficacy between treatment based on clonidine or lofexidine and fewer adverse effects than clonidine, and lofexidine has a better safety profile than clonidine.


they also credibly documented that patients in the clonidine maintenance protocol had a significantly reduced rate of opioid use disorder compared to those in the control group. this finding is consistent with previous studies that have shown the efficacy of clonidine for treatment of opioid use disorder. clonidine is a promising drug when used as adjuvant treatment to buprenorphine for maintaining abstinence from opioids. these authors documented longer duration of abstinence with clonidine as compared to placebo. they also credited their team’s effort in successfully managing opioid treatment clinically and efficiently. lopate et al., evaluated the effectiveness of the needle exchange program in a local setting for opioid use disorder. their results indicated that needle exchange significantly reduces the risk of transmission of bloodborne pathogens. however, they highlighted the need for further research to explore the long-term effects and sustainability of this intervention. pada et al., conducted a randomized controlled trial to assess the efficacy of buprenorphine-naloxone compared to methadone in opioid use disorder treatment. their results showed that buprenorphine-naloxone was associated with a better treatment outcome compared to methadone. this finding is consistent with previous studies that have shown the superior effectiveness of buprenorphine-naloxone over methadone in the treatment of opioid use disorder.
Drug misuse: opioid detoxification...
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