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NAHEWD
National Alliance for HIV Education and Workforce Development

Evidence Based Treatments for Chemsex Use Disorders

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Financial Disclosures & Affiliations

Financial Disclosures:

- None

Clinical Affiliations:

- Whitman-Walker Health, Washington DC
- Clinical Instructor, Yale School of Nursing

Professional Affiliations:

- VP for Education, GLMA: Health Professionals Advancing LGBTQ Equality
- Founder, ChemsexHarmReduction.org

This presentation was prepared without any commercial support

****Any off-label discussion of medication will be noted verbally, and with asterisks****

Learning Objectives:

By the end of presentations, participants will be able to…

1. Formulate an advanced understanding of the etiology and context of Chemsex use disorders using syndemic theory and cultural analysis
2. Apply motivational interviewing and harm reduction methodology to support the wellness of people who participate in Chemsex in an anti-paternalistic way
3. Translate clinical research on treatments for Chemsex substances into therapeutic prescribing practices

Case 1: Narrative

Ricky is a 29 year old Male (he/him) living with HIV who presents for a hospital follow-up after he was seen in the ED for paranoia and odd behavior. In the last 5 years his only other hospitalization was 3 years ago for a burn on his hand. Ricky reports fair adherence with ART, but sometimes he loses track of time. Ricky is currently staying with a buddy, and reports he is in between jobs, doing things here and there. Ricky reports using Tina every week with his buddy and at parTies. He has not had a lease in his own name in 4 years. He moved from Atlanta to NYC 6 years ago, and does not have family in the area. He reports occasional associated use of G, tadalafil, and poppers and occasional attendance of saunas and sex venues. He reports semi-secure access to food, and feels safe at his buddy's place. He reports his motivations for use are fun, feeling more like himself, and the connections -- while "some are thieves" he feels that he is less judged at parties

Why Do People Like Chemsex?

Affirming

Escape

Material & Cultural Survival

Florencio 2021

Syndemic Theory of Substance Use Disorders

Applied Social Determinants of Health

Leluţiu-Weinberger 2019, Bränström 2018, McCabe 2010, Lyons 2013

What is Substance Use Disorder? What is "Addiction"?

What are We Treating? – Disordered Use

DSM5 Criteria:

1. Taking the substance in larger amounts or for longer than you're m
2. Wanting to cut down or stop using the substance but not managing
3. Spending a lot of time getting, using, or recovering from use of the
4. Cravings and urges to use the substance.
5. Not managing to do what you should at work, home, or school bec
6. Continuing to use, even when it causes problems in relationships.
7. Giving up important social, occupational, or recreational activities b
8. Using substances again and again, even when it puts you in dange
9. Continuing to use, even when you know you have a physical or psy

worse by the substance.

10. Needing more of the substance to get the effect you want (tolerance).
11. Development of withdrawal symptoms, which can be relieved by taking more of the substance.

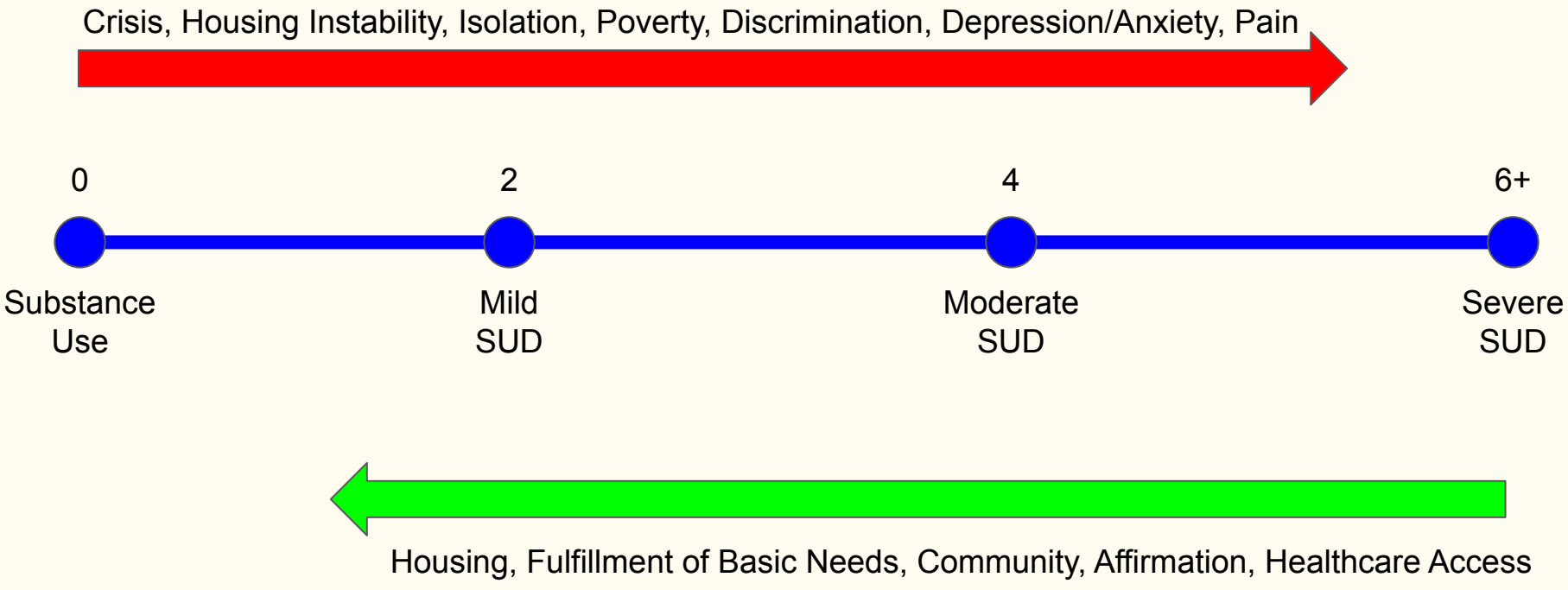
Loss of Control ***

Cravings ***

Social Dysfunction/Consequences ***

Physical Dependence/Withdrawal ***

Understanding the Spectrum: Social Service = Treatment



Case 2:

24 yo M AMAB (he/him) gay identifying financial consultant presents with a bad headache. The pt states he just got back from Market Days in Chicago and his head has been“splitting” ever since. He is living with HIV, UDVL stable on BIC/TAF/FTC. Upon questioning he reports that he has had about 26 male partners since he was last tested and treated for rectal and throat gonorrhea a month ago. He reports RAI, ROI, IAI, & IOI. He reports that he enjoys using substances as they provide relief from his busy work life. Upon further questioning he “got a few hours here and there” [of sleep] while at Market Days. He started with MDMA and GHB, then the second day he started using ketamine, and occasional bumps of cocaine to keep him going, and more GHB when he wanted to have sex. He reports that he is taking his BIC/TAF/FTC, but he forgets a dose maybe once or twice a month if he crashes after a long weekend. The patient states that he sleeps regularly on weekdays, but that once every two or three months he has needed to call out on a Monday because he needed extra recovery time to feel rested. Patient states he usually has no issues with his work performance, but is concerned as he has called out more frequently in the last 2 months

General Safety Counseling

Talk about their use with interest

- Hydration and nutrition
- Situational Safety
- Accountability
- STI Prevention: U = U, PrEP, PEP, Doxy PEP*
- Supplies

Strategies for Poppers and ketamine?

Poppers (amyl nitrites):

- Interactions with PDE5 Inhibitors
- Caustic and flammable
- Eye toxicity and methemoglobinemia with G6PD

Ketamine

- Stronger than cocaine, use ¼ to 1/3
- Hydration/Kidney health
- Route of administration (PO>IN>IV)

Motivational Interviewing

1. Express Empathy
2. Develop Discrepancies - “Change Talk”
3. Roll With Resistance
4. Celebrating Self Efficacy

Motivational Interviewing Tools

- Open Ended Questions
- Affirmation/Validation
- Reflective Listening
- Summarizing

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Case 3:

JC is a 27 yo NB AMAB (they/them) who is living with HIV. JC slams multiple times every week and has daily use of meth. JC used to work in food service, but now supports themself through combinations of gig work and sex work. JC reports irregular sleep, sometimes staying up for 4 days on end. They also report inconsistent nutrition and often eat candy during benders to sustain themselves. JC today presents concerned as they feel their stomach cannot tolerate HIV medication. They reports they're not sure they want to eliminate their use, but they want to significantly reduce it and stop slamming. JC is Hep C negative but recently had a scare, motivating their concern about slamming. JC has tried quitting cold turkey in the past but has issues with depression, anxiety and insomnia. They also get frequent euphoric recall.

Mental Health Diagnoses & SUD

- “Chicken or the Egg” Problem
  - Substance-related psychiatric symptoms
    - Meth high ≠ mania
  - High/withdrawal dichotomies mimic mood cycling
  - Anxiety/depression are symptoms & drivers
- Over- and miss- diagnosis of Bipolar and Schizophrenia along racial lines
  - Racial disparities in quality and setting of treatment
- Acceptance of Chart Lore/Problem Lists as fact
  - Diagnostic rigor & context of MH diagnoses
  - Ease of carrying forward, or errantly adding diagnoses

Therapeutic Psychiatric Prescribing for Substance Use

- Identify patient goals, and tailor interventions to support these goals
  - Recovery is patient-defined
- Identify key psychiatric symptoms and potential side effects of concern to the patient
  - Are they worried about weight gain?
    - Do they have underlying body dysmorphia?
  - Are they concerned about sexual function?
  - Are they concerned about work performance?
  - Are they concerned about too much, too little, or poor quality sleep?

Therapeutic Psychiatric Prescribing for Substance Use

- Consider the mechanism of the substance, the pathology of the withdrawal
  - What alterations in brain chemistry are we dealing with?
- Consider available research, and how that may apply to patient characteristics
- Consider what common medications may be contraindicated or ill advised
  - Are the safe to take with active use? Renal vs hepatic clearance?
  - Eg. with meth use SSRIs, lithium, and antipsychotics are relatively contraindicated

Methamphetamines

- MOA: block reuptake and promote release of neurotransmitters - primarily dopamine and norepinephrine
  - Increased energy and sex drive
  - Reduced need for sleep, reduced fatigue
  - Reduced inhibitions
  - Increased focus to hyperfocus and thought blocking
  - Vasoconstriction
  - Increased touch and pleasure sensations
- PO, smoked, or IV (slammed)

Mirtazapine for Meth Use

- MOA: alpha, serotonin, and histamine receptors - not directly serotonergic
  - Calms the nervous system - fast acting anxiolytic
  - Improves insomnia via histamine receptors, restores sleep/wake cycle
  - Increases appetite - no direct metabolic dysregulation
  - Low interaction profile and very safe, can be used during active use and for comedowns, much preferable to benzos
- Essentially the opposite of amphetamines

Mirtazapine for Meth Use- Colfax 2011

- Study Design: Double blind, RCT comparing mirtazapine vs placebo
- Setting: SFC DOH, California
- Population: MSM actively using meth, seen weekly
  - 60 subjects randomized, all cis MSM
- Intervention: 12 weeks tx 30mg mirtazapine or placebo. 30 minutes weekly counseling for both arms
- Primary Outcome: reduction in positive UDS
- Secondary/additional: medication adherence, HIV-risk behavior
- With ITT analysis with low-moderate adherence significant…
  - Reduction in meth-positive UDS
  - Reduction in HIV-risk sexual behaviors

Mirtazapine for Meth Use- Coffin 2019

- Study Design: Double blind, RCT comparing mirtazapine vs placebo
- Setting: Outpatient Research Clinic, SFC California
- Population: Sexually active cis-men, TGM, TGW who
  - Had sex with men, had MUD, and were actively using meth
  - 120 completed enrollment, diverse group of cis-men and TGW
- Intervention: 24 weeks tx 30mg mirtazapine or placebo, both with counseling. 12 weeks follow-up post-intervention.
- Primary Outcome: Positive UDS 12, 24, & 36 weeks
- Secondary/additional: sexual risk behaviors, sleep, cravings, dependence severity, AEs
- Even with relatively poor adherence, in ITT analysis significant…
  - Reductions in meth + UDS at 24 & 36 weeks
  - Fewer HIV-risk behaviors at 24 weeks
  - Positive effects on insomnia and depressive scores

Bupropion for Meth Use

- MOA: Inhibits reuptake of dopamine and norepinephrine
  - Activating antidepressant
  - Increases sex drive
  - Suppresses appetite
  - Increases focus/attention
- Similar to/cousin of amphetamine stimulants

Bupropion Trials

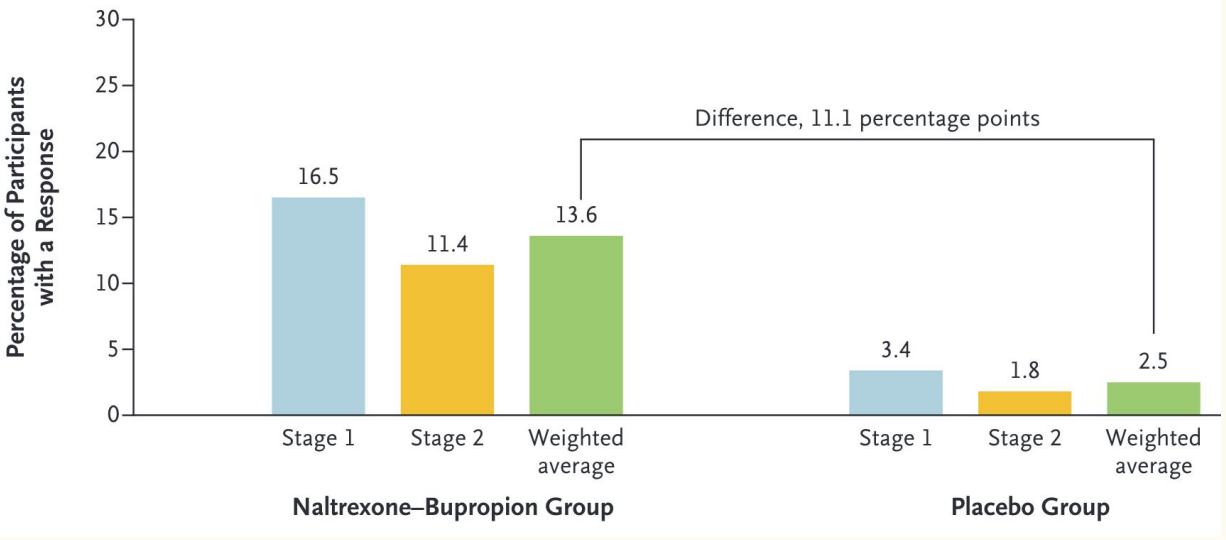
Name	Study Type	Population	N	Intervention	1° Outcome	Summary
Elkashef 2008 *	DB RCT + placebo	Mixed race/gender; SOGI not collected; in CA, MO, KI, HI; tx-seeking	151	300mg XL & counseling; 12 wks Tx, 30d f/u	Proportion of people with neg UDS	Effective for Males with low-mod use
Shoptaw 2008	DB RCT + Placebo	Mixed race/gender; SOGI not collected: in LA California; tx seeking	73	150mg SR BID & CBT & CM; 12 wks	Neg UDS	Effective for pts with lower baseline use
Heinzerling 2014	DB RCT + Placebo	Mixed race/gender; SOGI not collected; < daily baseline use; tx-seeking	84	150mg SR BID & CBT. 12 wks	Neg UDS	Effective for adherent pts
Anderson 2015 *	DB RCT + Placebo	Mixed race/gender; SOGI not collected; < daily baseline use; tx-seeking	204	150mg SR BID & group therapy TIW, 12 wk Tx, 28d f/u	Neg UDS end of tx	No sig effect

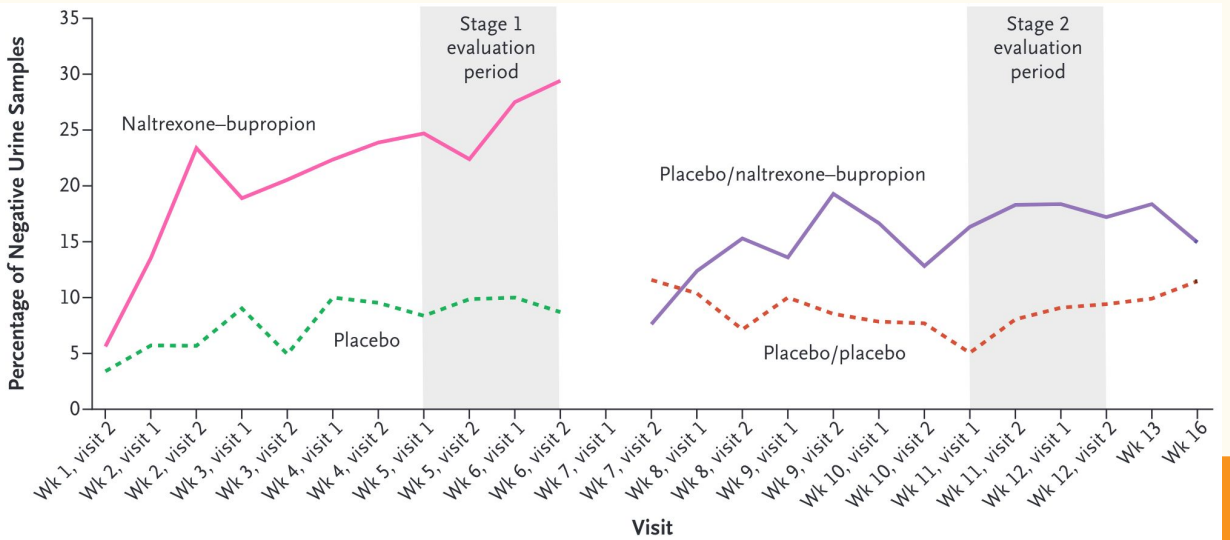
Bupropion Trials - Defining Success

- Does a negative UDS correlate to DSM5 MUD symptoms criteria?
  - All 4 trials had stringent negative UDS primary outcomes
- What kind of benefit can we expect from a medication?
  - Pre-treatment counseling, consider dose SR vs ER
- How do we interpret results with low sample sizes and many confounders?
  - Lack of SOGI data & use context
  - Inclusion of CBT & counseling at different intensities
  - Shoptaw included contingency management in both intervention arms
  - Power issues
    - Anderson: cannot conclude effect or ineffect

Trivedi 2021: Bupropion XL + Naltrexone-ER

- Study Design: Double blind, multi-site RCT, placebo controlled with two stage randomization parallel design
- Population: adults with mod-severe MUD seeking treatment, no SOGI data
- Intervention: 450mg bupropion XL + 380mg naltrexone-ER q-3wks
  - Two 6 week stages: Stage 1 N = 403; Stage 2 N = 225
- Primary Outcome: 3 consecutive neg UDS at end of stage & weighted average
  - Small but statistically significant response
- Secondary/additional: % neg, craving score, PHQ-9, tx efficacy/QOL assessment
  - Improvements across outcomes, but not planned/powered to calculate significance





Trivedi 2021

Naltrexone Trials

Name	Study Type	Population	N	Intervention	1° Outcome	Summary
Jayaram-Lindström 2008	DB, RCT + Placebo	Swedish adults w/ MUD	80	12 wks 50mg PO naltrexone + therapy	Total - UDS	• Sig higher number of - UDS • Sig improved rate of continuous abstinence • Sig reduction in cravings & self reported use
Tiihonen 2012	DB, RCT + Placebo	Russian adults with MUD & OUD	100	10 wk tx with naltrexone implant (1000mg)	•Retention •Proportion - UDS •CGI improvement	• Sig higher retention • Sig reduced opioid & meth use • Sig CGI scores/clinician rated response to Tx

Topiramate

- MOA: Stimulates GABA-A and reduces glutamate activity
  - Targets brain reward centers
  - Stabilizes mood and reduces excitability
  - Causes weight loss
  - Renal safety concerns, needs to be titrated
- Reduces use but does not promote abstinence
- Best at preventing return to use (RTU) for abstinence oriented folx

Topiramate Trials

Name	Study Type	Population	N	Intervention	1° Outcome	Summary
Elkashelf 2012	Multi-site, DC, RCT + Placebo	USA adults with MUD	140	13 wks escalating dose to 200mg + brief BH tx	Abstinence wks 6-12	• ITT 1° no significance • 2° outcomes: ◦ Reduced median weekly levels ◦ Reduced dependence score ◦ Sig abstinence maintenance
Rezaei 2016	DB, RCT + Placebo	Adults with MUD in Iran	62	10 wks escalating dose to 200mg	ASI, Beck tool, UDS	• ASI: < severity & need • Lower % pos UDS • Lower craving score

Long-Acting Stimulants

- Good option especially for those with high levels of injection use/slamming
- Methylphenidate-ER or lisdexamfetamine likely best options
    - Cannot be injected or snorted
- Close monitoring and extensive counseling needed
- Treat underlying ADD symptoms and dopamine pathology

Long Acting Stimulants

Name	Study Type	Population	N	Intervention	1° Outcome	Summary
Longo 2010	DB, RCT + Placebo	South Australian adults with MUD	49	SR-Dexamphetamine 12 wks supervised 110mg max dose, 4 wk taper	Retention Hair analysis Withdrawal sx	Significant.. • improved care retention • general decrease in use • lower dependence score • lower withdrawal sx score
Galloway 2011	DC, RCT + Placebo	Tx seeking adults CA, USA	60	Dextroamphetamine 60mg + weekly therapy	Neg UDS	• No sig reduced meth use • Significant lower withdrawal & craving scores
Anderson 2012	DB, RCT + Placebo	Tx seeking adults USA	210	Modafinil 200mg or 400mg + group therapy	1 wk/3 neg UDS	• No sig reduced meth use • Big issues w/ compliance • In Ad-hoc of compliant pts, sig greater abstinence

Methylphenidate-ER

Name	Study Type	Population	N	Intervention	1° Outcome	Summary
Tiihonen 2007	DB, RCT + Placebo	Adults with MUD in Nordic area	53	20 wks tx with 54mg vs 15mg aripiprazole vs placebo	Ratio +/- UDS	• Aripiprazole sig increased use • Stimulant group had sig less use
Konstenius 2014	DC, RCT + Placebo	Swedish M prisoners w/ ADHD/MUD,	54	24 wk tx, dose up to 180mg, weekly CBT	ADHD sx; RTU; retention; cravings; time to RTU	• Sig less ADHD sx • Sig more - UDS • Sig better retention
Rezaei 2015	DB, RCT + Placebo	Adults w/ MUD in Sanadaj & Tehran Iran	56	10 wk 18-54mg	Craving, UDS, Beck tool,	• Sig less + UDS • Sig less craving • Sig improved depressive scores

Lisdexamfetamine

Name	Study Type	Population	N	Intervention	1° Outcome	Summary
Ezard 2016	Dose escalating, open label, dose blinded	Australian adults	18	4 wk 100-250mg, 4 wk taper, 12 wk f/u	Safety, tolerability, retention	• Safe and well tolerated • 2° meth use decreased • Awaiting LIMA results
Heikkinen 2022	Register based prospective cohort study	13,965 Swedish Adults 16-64 w/ MUD without bipolar or Schizophrenia		ADHD Rx SUD Sx Antidepressants Mood stabilizers Antipsychotics Benzos	•1° Outcomes: ◦Hospitalization 2/2 SUD ◦Any hospitalization or death • 2° Outcome: All-cause mortality • Findings: ◦ Lisdexamfetamine only drug associated with significant reduced risk of all 3 outcomes ◦ Benzo use was associated with significantly poorer outcomes	

Case 3:

JC is a 27 yo NB AMAB (they/them) who is living with HIV. JC slams multiple times every week and has daily use of meth. JC used to work in food service, but now supports themself through combinations of gig work and sex work. JC reports irregular sleep, sometimes staying up for 4 days on end. They also report inconsistent nutrition and often eat candy during benders to sustain themselves. JC today presents concerned as they feel their stomach cannot tolerate HIV medication. They reports they don't want to eliminate their use, but they want to significantly reduce it and stop slamming. JC is Hep C negative but recently had a scare, motivating their concern about slamming. JC has tried quitting cold turkey in the past but has issues with depression, anxiety and insomnia. They also get frequent euphoric recall.

Case 4:

Cherry is a 44 year old F AMAB (she/her) with a history of Hepatitis C s/p SVR. She formerly participated in survival sex work, and often parTied with meth and crack cocaine with clients. Cherry decided she wanted to make a change, and elected to participate in a residential treatment program. She is now out of the program and has not used in 4 weeks, and has transitional housing. She is concerned however for insomnia, anxiety, cravings and euphoric recall. Cherry is excited about her progress but concerned her symptoms may lead to a return to use.

Case 5:

Andreas is a 39 yo M (he/him) who identifies as gay. He enjoys sex parties and frequently uses G. He has been living with a friend who deals drugs and has moved from using G one to two times per week to daily use. He reports he can no longer sleep without G and gets shakes if he goes without for too long.

G Safety Counseling

- Recovery position → Most G deaths caused by vomit aspiration/asphyxiation
- Risk for overdose and dependance
    - Drug holidays, dose timelog, exact measurements (syringe)
- Avoid alcohol as well as benzodiazepines, opiates, and antihistamines
- Buddy system and G sleep supervision

Baclofen + Benzodiazepines for Detox/Treatment

- Baclofen important for detox along with benzodiazepines - Accepted Standard of Care
  - Works on GABA-B receptors vs GABA-A
- Beurmanjer 2018: Dutch open label, non-randomized, multi-site trial
  - N = 107, TAU vs baclofen 45-60mg/day for 3 months after detox
  - Outcomes: any RTU, RTU >1x per week
  - Some sig retention in care, reduced dropout & RTU rates

Taylor 2015, Zvosex 2022

Quick Resources

- Chemsex Patient Safety Guides at Chemsex.gay
- Information for health care providers at Chemsex.health
- Safer slamming/meth use information at tweaker.org
- How-to video on safer injection of stimulants https://vimeo.com/174172509
- Guides to safer opioid use at harmreduction.org

Question & Answer

Questions? Contact me…

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