Implementing outpatient alcohol withdrawal management into primary care

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Disclosure Information (Required)

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Learning Objectives

- Discuss evidence for outpatient alcohol withdrawal symptom (AWS) management
- Apply validated screening tools to develop effective and safe AWS management protocols
- Implement EHR tools to facilitate protocol adoption
- Review pre- and post-implementation provider knowledge and satisfaction



"Justin"

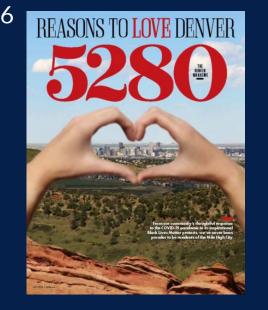
- 34 yo M, uncomplicated medical history presents for help to stop drinking.
- Expecting child in next 1-2 months, thinks daily drinking might be getting to be a bit more of a problem.
- Typically drinks 10-12 drinks per night. "Daily hangover" that improves with more alcohol. Concerned that he won't be able to quit cold turkey.
- No history of withdrawal seizures or inpatient treatment. Outpatient treatment in the past, no other substance use. Last drink was last night and



"Justin"

- Justin would prefer outpatient treatment, what treatment option would you recommend for him?
 - A. Refer to social detox program
 - B. Transfer to medically supervised detox facility
 - C. Advise to gradually reduce alcohol intake and provide ER precautions for severe withdrawal
 - D. Prescribe gabapentin or carbamazepine for outpatient detox
 - E. Prescribe benzodiazepine or barbiturate for outpatient detox







- High risk drinking increased 30%¹
- AUDs increased 50%
- Deaths attributable to ETOH increased 35% 2007-2017
- ◆ 85% increase among women
- Large increases in binge drinking-related
 ED visits 2006-2014





Scope of the problem

- ◆ 2-9% of all U.S. outpatients meet criteria for AUD²
- Perhaps <10% of patients with AWS require inpt detoxification³
- Availability of detox a barrier to ongoing treatment, sobriety⁴
- ◆ 3% of commercially insured pts with AUD received Rx therapy in 2012
- ◆ 8% received any treatment in 2015 (mostly non-medical)

Patients	AUD Diagnosis	Percent
86838	4965	5.72%
86838	4055	4.67% *

* Excludes remission codes



Why outpatient?

Inpatient

- Standard of care
- Limited access (hospital admission or medical detox)
- Disruptive to patients
- Expensive

Outpatient

- Greater access
- Less disruption of work, family life
- ◆ Inexpensive⁵
- Multiple
- Underutilized⁶
- Serious withdrawal relatively uncommon⁷



⁵Hayashida M, et al. Comparative effectiveness and costs of inpatient and outpatient detoxification of patients with mild to moderate alcohol withdrawal syndrome. *NEJM*. 1989;320:358.

⁶Bayard M, et al. Alcohol Withdrawal Syndrome. Am Fam Physician. 2004;69(6):1443-1450.

⁷Wood E, Albarqouni L, Tkachuk S, Green CJ, Ahamad K, Nolan S, et al. Will This Hospitalized Patient Develop Severe Alcohol Withdrawal Syndrome?: The Rational Clinical Examination Systematic Review. 2018 *JAMA*, 320(8), 825–833.

IS OUTPATIENT WITHDRAWAL MANAGEMENT SAFE? IS IT EFFECTIVE?



2017 Systematic Review⁸

- Most studies conducted in 1990's-2000's
- ◆ 20 studies
 - ◆ 13 in UK, 2 in U.S., 2 in Australia. 4 RCTs
- High completion rates
- Reported safe
- Good acceptability
- Cost-saving
 - Hospitalization 6-22x more expensive



Significant barriers⁸

- **◆** Time constraints
- Concerns about patient medication misuse
- Absence of caregiver
- Children at home
- Multiple detoxifications
- Housing instability
- Social isolation/poor support
- Medical, psychiatric disease
- Provider prescribing expertise



Review Conclusions⁸

- Safe, effective
- Cost-saving
- Improves outcomes
- Absence of evidence, even in resource-rich settings
- "A safe and effective community detoxification program should be characterized by clearly defined eligibility criteria, non ambiguous medication protocols based on objective measurement of withdrawal symptoms, at least daily structured monitoring of the patient's progress, and linkage with continuing psychosocial care after completion of detoxification."



ASAM Clinical Practice Guideline⁹

◆ Level of care determination should be based on a patient's current signs and symptoms; level of risk for developing severe or complicated withdrawal or complications of withdrawal; and other dimensions such as recovery capital and environment. Alcohol withdrawal can typically be safely managed in an ambulatory setting for those patients with limited or mitigated risk factors.



Conclusions

- Outpatient detoxification likely safe, effective, and cost-saving
- Recommended by national guidelines/experts
- No widely accepted criteria for outpatient detox
 - Most studies exclude prior complicated withdrawal, baseline severe medical or psychiatric disease, or absence of a caregiver
- Barriers to greater utilization include:
 - Time constraints
 - Intensity of monitoring
 - Prescriber comfort



PROTOCOLS AND IMPLEMENTATION



Predictor of Alcohol Withdrawal Severity Scale (PAWSS)¹⁰





Easy and quick to administer

Accurate

Sensitivity 93.1% (95%CI[77.2, 99.2%])

Specificity 99.5% (95%CI[98.1, 99.9%])

PPV: 93.1%

NPV: 99.5%

High inter-rater reliability



PAWSS

Threshold criteria:

Yes	No
Yes	No
Yes Yes	No No
Yes	No
Yes	No
Vec	No
165	INU
Yes	No
	Yes Yes Yes Yes Yes Yes Yes Yes

Score of 4 or greater indicates higher risk

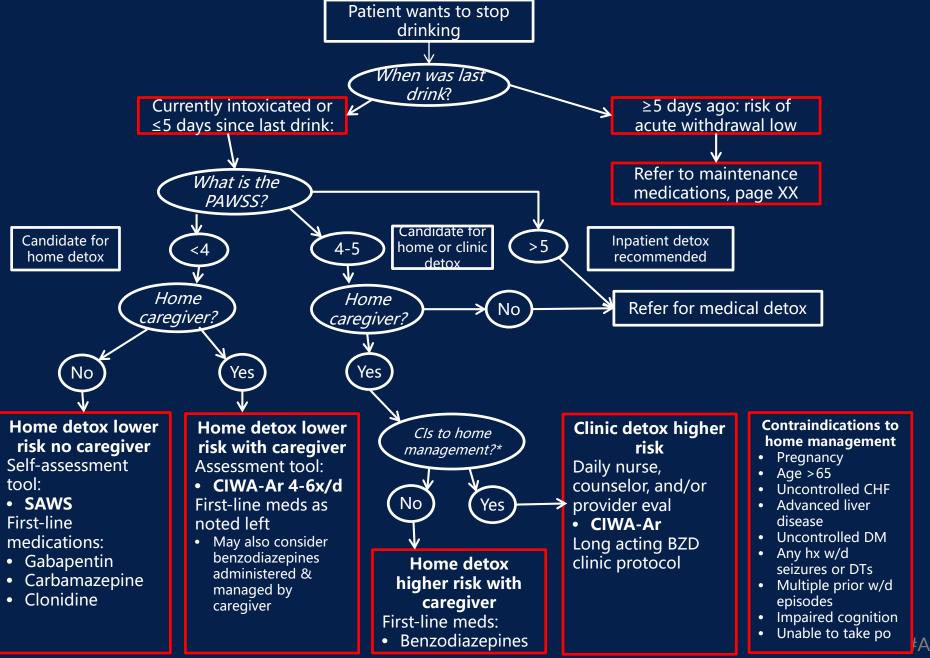


Short Alcohol Withdrawal Scale (SAWS)¹¹

- Anxious
- Feeling confused
- Restless
- Miserable
- Memory problems
- Tremors or shakes
- Nausea
- Heart pounding
- Sleep disturbance, insomnia
- Sweating

- Self-assessment
- Score each criterion from 0-3:
 - Score 0: none
 - Score 1: mild
 - Score 2: moderate
 - Score 3: severe
- Score <12: mild</p>
- Score ≥12: moderate to severe







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Medication protocols

Day	Gabapentin	Carbamazepine
1	600 mg BID or 300 TID-QID	200 mg BID-QID or 400 mg BID
2	600 mg BID or 300 TID-QID	200 mg BID-QID or 400 mg BID
3	300 mg am/ 300-600 at bedtime	200 mg BID-TID
4	300 mg am/ 300-600 at bedtime	200 mg BID-TID
5	300 mg BID	200 mg BID
6	300 mg BID	200 mg once daily
7	300 mg at bedtime	200 mg once daily

Day	Clorazepate	Chloridiazepoxide	Diazepam
1	15-30 mg every 8 hrs	25-50 mg every 6 hrs	10-20 mg every 6 hrs
2	15-30 mg every 12 hrs	25-50 mg every 8 hrs	10-20 mg every 8 hrs
3	15 mg every 12 hrs	25-50 mg every 12 hrs	10-20 mg every 12 hrs
4	15 mg at bedtime	25-50 mg at bedtime	5-10 mg at bedtime
5	7.5 mg at bedtime	25-50 mg at bedtime	5-10 mg at bedtime



Companion Tools

Standard Notes

- Intake
- Follow up

Order Sets

- Lab testing
- Medications

Instructions for caregivers

- Medication dosing
- Importance of hydration
- Possible need for transfer
- Warning signs of decompensation:
 - Persistent vomiting
 - Agitation despite multiple medication doses
 - Hallucinations
 - Confusion
 - Seizure
 - Over-sedation



"Justin"

- **◆** PAWSS = 3
- **◆** CIWA-Ar = 3
- Gabapentin taper prescribed.

When should he be followed up? Phone or in-person?

- Next day
- Every other day
- Next week
- See him back in a month; you don't have time for this



Follow up

- "Arrange patient check-ins with a "qualified health provider (e.g., MA, Nurse) daily for up to 5 days following cessation or reduction..."
- "Alternating in person visits with remote check-ins via phone or video call is an appropriate alternative"



"Justin"

- Follow-up calls were made daily through the week
- Seen in-person in clinic on Monday the following week
- Withdrawal symptoms were minimal
- Last alcohol use prior to first visit

What should you do now?

- Nothing; he's cured
- Refer him to specialty addiction treatment
- Refer him to AA or another mutual help group
- Begin a maintenance medication



"Justin"

- Started on naltrexone the following Monday
- Followed up 1 month later. Abstained from alcohol for the last 30 days and refilled naltrexone



How to measure success?

- "Several leading guidelines conclude that the success of AW management episode is defined not only by the acute management of withdrawal...but by the engagement in continued treatment for AUD by patients."9
- Initiate AUD treatment concurrent with withdrawal management when possible
- Warm handoff to treatment providers at a minimum



What are reasonable goals?

- Abstinence
- Reduced craving?
- Reduced binging?
- Reduced consequences?
- Harm reduction goals may be increasingly accepted in treatment community¹²



PILOT RESULTS



Quantitative Measures	Results
# of individuals enrolled	16 4 females, 12 males Ages 21-60
# of individuals who completed withdrawal	13
# of individuals inducted onto MAT following completion	13
# and type of complications, if any	ED visit in 1 patient
PAWSS score mean	4.31
Withdrawal medications used	Librium (8), Gabapentin (8)
Mean # of follow up visits during treatment	3.31



PROVIDER SURVEY RESULTS



Provider Surveys

- Pre- (n=11) and post-implementation (n=18) surveys were conducted with providers
- Questions included comfort prescribing medications for AWS, comfort counseling patients, comfort with maintenance medications, and frequency of AWS episode management



Results

Question	Pre	Post
Comfort with withdrawal medication use		
Benzodiazepines	54.5%	44.1%
Gabapentin	81.8%	67%
Comfort counseling patients/family	54.5%	50%
Comfort prescribing maintenance medications		
Naltrexone oral	54.5%	88.9%
Naltrexone IM	45.4%	55.6%
Gabapentin	45.4%	72.2%
Acamprosate	45.4%	60.1%
Frequency of outpatient withdrawal management		
Never	36.4%	16%
Monthly or more than monthly	9%	22.2%

Final Takeaways

- Outpatient AWS Management is underutilized
- Wider adoption facilitated by implementing evidence-based tools in clear protocols, with EHR supports
- Can be a source of satisfaction for providers
- Measures of success must look beyond protocol completion



References

- 1. GBD 2016 Alcohol Collaborators. Alcohol use and burden for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study. 2018 Lancet 2018; 392: 1015-35.
- 2. Muncie HL, Ysainian Y, Oge L. Outpatient Management of Alcohol Withdrawal Syndrome. *Am Fam Phys* 2004;88:589-595.
- 3. Saitz R, Mayo-Smith MF, Roberts MS, Redmond HA, Bernard, DR, Calkins DR. JAMA. 1994;272:519-523.
- 4. Klijnsma MP, Cameron ML, Burns TP, et al. Out-patient alcohol detoxification—outcome after 2 months. Alcohol Alcohol. 1995; 30(5):669-673
- 5. Hayashida M, et al. Comparative effectiveness and costs of inpatient and outpatient detoxification of patients with mild to moderate alcohol withdrawal syndrome. *NEJM*. 1989:320:358.
- 6. Bayard M, et al. Alcohol Withdrawal Syndrome. *Am Fam Physician*. 2004;69(6):1443-1450.
- 7. Wood E, Albarqouni L, Tkachuk S, Green CJ, Ahamad K, Nolan S, et al. Will This Hospitalized Patient Develop Severe Alcohol Withdrawal Syndrome?: The Rational Clinical Examination Systematic Review. 2018 JAMA, 320(8), 825–833.
- 8. Nadkarni A et al. Community detoxification for alcohol dependence: a systematic review. *Drug Alcohol Rev* 2017;36:389-399
- 9. Wong J, Saver B, Scanlan JM, et al. The ASAM Clinical Practice Guideline on Alcohol Withdrawal Management. J Addict Med. 2020;14(3S)(suppl 1):1-72.
- 10. Maldonado JR, Sher Y, Das S, Hills-Evans K, Frenklach A, Lolak S, Talley R, Neri E. Prospective Validation Study of the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) in Medically III Inpatients: A New Scale for the Prediction of Complicated Alcohol Withdrawal Syndrome. Alcohol Alcohol. 2015 Sep;50(5):509-18.
- 11. Elholm B, et al. A psychometric validation of the short alcohol withdrawal scale (SAWS) Alcohol Alcohol. 2010;45(4):361-365
- 12. Witkiewitz, K., Wilson, A., Roos, C. R., Swan, J., Votaw, V., Stein, E., ... Tucker, J. (2020, June 17). Can Individuals with Alcohol Use Disorder Achieve and Sustain Non-Abstinent Recovery? Non-Abstinent Outcomes 10 Years After Alcohol Use Disorder Treatment. https://doi.org/10.31234/osf.io/zpcsr
- 13. Substance Abuse and Mental Health Services Administration and National Institute on Alcohol Abuse and Alcoholism, Medication for the Treatment of Alcohol Use Disorder: A Brief Guide. HHS Publication No. (SMA) 15-4907. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2015.
- 14. Holt SR & Tobin DG Pharmacotherapy for Alcohol Use Disorder. *Medical Clinics of North America* 2018;102:653-666.
- 15. Gasper JJ, DiPaula BA. Pharmacist Toolkit: Alcohol Use Disorder College of Psychiatric and Neurologic Pharmacists. https://cpnp.org/guideline/aud Accessed online 6/22/20.
- 16. Sachdeva A, Choudhary M, Chandra M. Alcohol withdrawal syndrome: benzodiazepines and beyond. J Clin Diagn Res. 2015;9:VE01-VE07.
- 17. Goodson C, Clark B, Douglas I. Predictors of severe alcohol withdrawal syndrome: a systematic review and meta-analysis. *Alcohol Clin Exp Res.* 2014;38(10):2664-2677.



References

- 18. Whitfield CL, et al. Detoxification of 1,024 alcoholic patients without psychoactive drugs. JAMA. 1978;239:1409
- 19. Malcolm R, et al. The effects of carbamazepine and lorazepam on single versus multiple previous alcohol withdrawals in an outpatient randomized trial. *J Gen Int Med.* 2002;17:349.
- 20. Kolodner G. Rethinking withdrawal management: expanding the use of outpatient settings. PCSS Webinar https://www.ddap.pa.gov/Get%20Help%20Now/Documents/AWM%20webinar%20DDAP.pdf accessed Tuesday February 26, 2019
- 21. Beresford T, et al. The Severity of Ethanol Withdrawal Scale in Scale-Driven Alcohol Withdrawal Treatment: A Quality Assurance Study. *Alcoholism Treatment Quarterly* 2017;35:232-242. DOI: 10.1080/07347324.2017.1322418
- 22. Nisavic M, et al. Use of phenobarbital in alcohol withdrawal management- a retrospective comparison study of phenobarbital and benzodiazepines for acute alcohol withdrawal management in general medical patients. *Psychosomatics* 2019;60:458-467.
- 22. Harris A.H., Ellerbe L., Reeder R.N., et al: Pharmacotherapy for alcohol dependence: perceived treatment barriers and action strategies among Veterans Health Administration service providers. Psychol Serv 2013; 10: pp. 410-419
- 23. Jonas D.E., Amick H.R., Feltner C., et al: Pharmacotherapy for adults with alcohol use disorders in outpatient settings: a systematic review and meta-analysis. JAMA 2014; 311: pp. 1889-1900
- 24. Blodgett J.C., Del Re A.C., Maisel N.C., et al: A meta-analysis of topiramate's effects for individuals with alcohol use disorders. Alcohol Clin Exp Res 2014; 38: pp. 1481-1488
- 25. Pharmacotherapy for adults with alcohol-use disorders in outpatient settings executive summary: Agency for Healthcare Research and Quality. 2014. Available at: https://effectivehealthcare.ahrq.gov/topics/alcohol-misuse-drug-therapy/clinician. Accessed March 21, 2018
- 26. Mason B.J., Quello S., Goodell V., et al: Gabapentin treatment for alcohol dependence: a randomized clinical trial. JAMA Intern Med 2014; 174: pp. 70-77
- 27. Edelman EJ, Oldfield BJ, Tetrault JM Office-based addiction treatment in primary care. Med Clin N America 2018;102:635-652
- 28. Gossop M, Keaney F, Stewart D, Marshall EJ, Strang J. A Short Alcohol Withdrawal Scale (SAWS): development and psychometric properties. Addict Biol. 2002 Jan;7(1):37-43. doi: 10.1080/135562101200100571. PMID: 11900621.
- 29. Reoux JP, Miller K. Routine hospital alcohol detoxification practice compared to symptom-triggered management with an objective withdrawal scale (CIWA-Ar). Am J Addict. 2000;9:135-144. PubMed PMID: 10934575



ADDITIONAL CASES



Case 2: "Freddy"

- 51yoM with history of DVT and alcohol use disorder presents for help with quitting drinking.
- Outpatient treatment episodes in the past with some success, most recently in office-based addiction treatment.
- Prescribed naltrexone, but now feels like he needed "something stronger" to stop drinking.
- Wants to stop drinking to be a better father when he has his children 4 days per week.
- Drinking 6 pack and $\frac{1}{2}$ pint of liquor per day. Last drink yesterday, feeling tremulous with a headache today.
- History of mild withdrawal but no seizures. Uses cocaine when he drinks and occasional blacks out. He lives with his minor children 4 days per week and alone on other days.



"Freddy"

Freddy would prefer outpatient treatment, what treatment option would you recommend for him?

- A. Refer to social detox program
- B. Transfer to medically supervised detox facility
- C. Advise to gradually reduce alcohol intake and provide ER precautions for severe withdrawal
- D. Prescribe gabapentin or carbamazepine for outpatient detox
- E. Prescribe benzodiazepine or barbiturate for outpatient detox



"Freddy"

- ◆ PAWSS = 4
- Started on gabapentin
- Made one follow up appointment and then lost to follow up
- Several months later returned with similar story
- Started gabapentin again. Team emphasized importance of follow up appointments
- Daily phone follow up x 5. Was able to stop drinking with minimal withdrawal symptoms.
- Did not return for 1 week follow up appointment



Case 3: "Janie"

- 59yoF with history of severe alcohol use disorder, osteoporosis and recent hip fracture presents with her partner who is in recovery for help with stopping drinking.
- Drinking ½ box of wine per day (17 drinks). Last period of sobriety was 9 months ago and was able to stop drinking for about 2 months with support from AA meetings.
- Tried to quit cold turkey about 3 weeks ago and got very shaky and sick after about 36 hours so she started drinking again.
- Last drink was last night about 10 hours ago and she is starting to feel a little shaky now.
- She reports a history of DTs, but no seizures. Has had blacks out in the recent pass. Daily smoker, no other substance use.



"Janie"

Janie would prefer outpatient treatment, what treatment option would you recommend for her?

- A. Refer to social detox program
- B. Transfer to medically supervised detox facility
- C. Advise to gradually reduce alcohol intake and provide ER precautions for severe withdrawal
- D. Prescribe gabapentin or carbamazepine for outpatient detox
- E. Prescribe benzodiazepine or barbiturate for outpatient detox



"Janie"

- ◆ PAWSS = 5, CIWA-Ar = 6
- Partner is reliable caregiver
- Started on chlordiazepoxide 25-50mg q6h on day 1
- Daily follow up by phone, in-person visit in clinic on day 2
- Experienced mild-moderate withdrawal for first 3 days of protocol but then declining symptoms. Max CIWA-Ar = 9-10
- Sedation with 50mg dose, decreased to 25mg dose with better tolerability
- Started oral naltrexone at 1 week follow up visit, then naltrexone-XR at subsequent 1 week follow up.
- Has re-engaged in AA with her partner



Case 4: "Dori"

- 61yoF with history of severe alcohol use disorder, MDD and anxiety presenting for help with stopping drinking.
- Alcohol use for several decades. Starting to have other health problems including episodic alcoholic pancreatitis and alcoholic hepatitis which is motivating her to stop drinking.
- History of DT's and seizures and has required hospitalization for alcohol detox in the past. Drinks about a fifth of vodka per day. Recently has tried to cut back but gets shakes and sweats if she cuts back too much.



"Dori"

Dori would prefer outpatient treatment, what treatment option would you recommend for her?

- Referral to social detox program
- Transfer to medically supervised detox facility
- Advise to gradually reduce alcohol intake and provide ER precautions for severe withdrawal
- Prescribe gabapentin or carbamazepine for outpatient detox
- Prescribe benzodiazepine or barbiturate for outpatient detox



"Dori"

- ◆ PAWSS 6; CIWA-Ar <3</p>
- No caregiver at home
- Referred to inpatient medical detox
- LAC completed intake with patient over the phone at treatment facility
- Patient ambivalent about going to inpatient treatment and has yet to begin her detox.



END

Thank you! jblum@dhha.org

Further discussion and questions



