MI-06 Withdrawal and addiction when supply ends: alcohol, opioids, benzodiazepines, tobacco

HEALING after the FALL, research library, MI-06

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When supply ends, every dependent body in a village withdraws within the same few weeks. This report asks who dies, when, and what prevents it with what a village can hold. It builds on ME-05, ME-03, ME-09, CH-04 and MI-02 without repeating them. It covers delirium tremens and withdrawal psychosis for MI-05. The rules for stills and poppies belong to GOVERNING.

The short answer: alcohol and sedative withdrawal kill, through fits and delirium in the first four days. Opioid withdrawal kills mainly through dehydration and, afterwards, through overdose once tolerance is gone. Tobacco withdrawal does not kill. What prevents deaths is mostly cheap: a watcher, water, a written score, thiamine, and a counted sedative given early.

1. The Fall as a withdrawal event: how many, in 300 and in 3,000

A village of 300 holds about 220 adults [VERIFY, my inference from a rich-country age structure]. The World Health Organization put alcohol use disorders at 14.8 per cent of men and 3.5 per cent of women in Europe, and 11.5 and 5.1 per cent in the Americas (WHO 2018). Those figures include harmful use as well as dependence. If about half are dependent, a European village of 300 has roughly 5 to 10 dependent drinkers [VERIFY, inference]. About half of people with alcohol use disorder have a withdrawal syndrome when they stop or cut down (Schuckit 2014).

Long-term benzodiazepine use was 2.8 per cent of French adults (Airagnes et al. 2019), and in the United States use rose with age to 8.7 per cent at 65 to 80 (Olfson, King and Schoenbaum 2015). That is about 6 long-term users per village, mostly older [VERIFY, inference]. Long-term prescribed opioid use runs at a few per cent of adults in rich countries [VERIFY, no primary source read], another 5 to 10 people plus any illicit use. About one adult in five uses tobacco (WHO 2024), so about 45 smokers.

The arithmetic of deaths [VERIFY, inference]: among 206 hospitalised alcoholics in the classic series, 12 per cent had fits, 18 per cent hallucinations and 5 per cent delirium tremens (Victor and Adams 1953, via Stern et al. 2010). So 5 to 10 withdrawing drinkers give a village perhaps one fit and a quarter to a half of a delirium. With treatment 1 to 4 per cent of delirium patients die (Schuckit 2014), and untreated up to 35 per cent (Bramness et al. 2022). That is about 0.1 deaths per village and one or two per district of 3,000.

The brief suggests withdrawal may kill more than infection in the first month. The arithmetic does not support that. The larger killer in the record is drinking itself (section 8). What withdrawal does is arrive all at once, in the first fortnight, when the dispensary is least organised.

2. Alcohol

2.1 The course, and who dies

Symptoms begin within about 8 hours of the last drink, peak at about 72 hours and ease markedly by days 5 to 7 (Schuckit 2014). The WHO training manual for closed settings gives 6 to 24 hours to onset, the worst at 36 to 72 hours, and 2 to 10 days in all (WHO WPRO 2009). The order is tremor, sweating, nausea, anxiety and a fast pulse first. Fits come in the first two days. Hallucinations may come in that window with a clear head. Delirium usually starts about 3 days after the first symptoms and lasts 1 to 8 days, usually 2 or 3 (Schuckit 2014).

Schuckit lists who is likely to go on to delirium: - a CIWA-Ar score over 15 together with a systolic pressure over 150 or a pulse over 100 - a recent fit, seen in about 20 per cent of delirium cases - delirium or fits in earlier withdrawals - older age - other sedatives in use - medical illness, including low potassium, low magnesium and low platelets

In a Norwegian inpatient sample 24 per cent of 114 people reported delirium at some time in their lives, and estimates across people with alcohol use disorder run from 5 to 12 per cent (Bramness et al. 2022).

Deaths in delirium come from high temperature, heart rhythm disorders, the complications of fits, and pneumonia, injury or liver failure (Schuckit 2014). In a village the plain killers are dehydration in a sweating man nobody is watching, and the fit that happens face-down or near the fire.

Repeated withdrawals get worse. Hemmingsen and Kramp (1988) proposed that the physical signs of each withdrawal follow the latest bout of drinking, while fits and psychotic signs build up over years of repeated withdrawals. In their rat model, repetition increased only the convulsive component. This is kindling. A drinker who goes dry when the stock runs out, drinks when the first still runs, and goes dry again is kindling himself. A steady taper or steady abstinence is safer than a stop-start supply [VERIFY, inference from an abstract].

2.2 A withdrawal fit is not epilepsy

A first fit 6 to 48 hours after the last drink, in a heavy drinker, is a withdrawal fit until shown otherwise (Schuckit 2014, CH-04 red flags). It calls for a sedative to cover the withdrawal, thiamine and a watcher, not lifelong phenobarbital. Long-term phenobarbital creates a second dependence, whose own abrupt end brings fits and delirium within 16 hours (THRIVING library, CH-04). A fit outside the window, one starting in one limb, one after a head injury (drinkers fall), one with fever and stiff neck, or confusion lasting hours afterwards goes to CH-04's pathway.

2.3 Delirium tremens and withdrawal psychosis (for MI-05)

Alcoholic hallucinosis comes early, within two days: voices or visions in a person who knows where he is and what day it is. Hemmingsen and Kramp (1988) call it impending delirium. **Delirium tremens** comes from about day 3: disoriented, tremulous, sweating, feverish, fast-hearted, picking at things that are not there, swinging from hour to hour. The orientation item on the scales below separates them. MI-05 should treat any new psychosis within a week of stopping drink or a sedative as withdrawal until shown otherwise, needing a sedative, fluids and thiamine, not an antipsychotic alone. In the Veterans Administration trial of 537 patients, chlorpromazine was no better than placebo against delirium and had the most fits of any arm (Kaim et al. 1969, via Stern et al. 2010). MI-02 makes the matching rule for counsellors: symptoms that began after stopping alcohol are never treated by counselling alone (THRIVING library, MI-02).

2.4 Scoring withdrawal by hand

Two scales are in use.

The **CIWA-Ar** scores nine items 0 to 7 (nausea, tactile, tremor, auditory, sweats, visual, anxiety, headache, agitation) and orientation 0 to 4, maximum 67 (Sullivan et al. 1989, Stanford reproduction). Below 8 to 10 usually needs no

drug, and over 15 is severe (Schuckit 2014). It needs a trained interviewer and a patient who can answer.

The **WHO Alcohol Withdrawal Scale** has seven items, and its score needs only a thermometer and eyes (WHO WPRO 2009): - sweating 0 to 4 - tremor 0 to 3 - anxiety 0 to 4 - agitation 0 to 4 - temperature: 37.0 or less scores 0, 37.1 to 37.5 scores 1, 37.6 to 38.0 scores 2, 38.1 to 38.5 scores 3, over 38.5 scores 4 - hallucinations 0 to 4 - orientation 0 to 4

A total of 1 to 4 is mild, 5 to 14 moderate, and 15 or more severe. Score three or four times a day for at least three days. This is the village scale: a lay watcher learns it in an afternoon, and it builds in the fever of delirium.

2.5 What prevents deaths: sedatives, and how much a withdrawal uses

Benzodiazepines prevent withdrawal fits. In the Cochrane review of 64 studies with 4,309 participants they cut fits against placebo with a risk ratio of 0.16 (0.04 to 0.69, 3 studies, 324 people), and chlordiazepoxide did best numerically (Amato et al. 2010). An earlier meta-analysis of 65 controlled trials found they cut delirium by 4.9 cases per 100 (0.7 to 9.0) and fits by 7.7 per 100 (3.5 to 12.0). Beta-blockers, clonidine and carbamazepine eased symptoms but had too little evidence to be used alone (Mayo-Smith 1997, secondary summaries).

Dosing by score uses less drug for the same safety. In a double-blind trial of 101 inpatients, giving chlordiazepoxide only when the CIWA-Ar was high cut median treatment from 68 to 9 hours and total dose from 425 to 100 mg, with no difference in fits or delirium (Saitz et al. 1994).

Loading gives the sedative early and lets it wear off on its own. Diazepam 20 mg every 2 hours until drowsy but rousable needed a median of about 60 mg (Sellers et al. 1983, abstract and a later letter), and its long half-life gives a built-in taper. The Australian guideline allows 60 to 80 mg, review if agitation persists after 80 mg, and more than 120 mg only after specialist review (Haber et al. 2021).

A fixed schedule, the WHO course for moderate withdrawal, gives 10 mg four times a day on days 1 and 2, then falls to 30, 20 and 10 mg a day on days 3 to 5: 140 mg in all, with up to 120 mg in a bad 24 hours (WHO WPRO 2009).

Delirium needs far more: diazepam above 2,000 mg in the first 2 days in some patients, or phenobarbital up to 1,500 to 2,000 mg on day 1 (Schuckit 2014). **Paraldehyde** is history. In 34 patients with severe delirium, diazepam calmed them in half the time, and all 9 adverse reactions were in the paraldehyde arm (Thompson, Johnson and Maddrey 1975).

The stock arithmetic. ME-09 sets the decade stock at 20 tablets of diazepam 10 mg for a village and 2,000 for a district (THRIVING library, ME-09, row 21). The village's 200 mg is one fixed WHO course, or two or three courses dosed by score, and it competes with CH-04's rescue doses for prolonged fits. One delirium can use ten times that. The district's 20,000 mg covers perhaps 150 moderate withdrawals or a dozen bad deliria [VERIFY, inference]. **This is the most important number in the report: at ME-09's levels a village cannot treat its own first-month alcohol withdrawals with diazepam.**

Phenobarbital is the plentiful alternative. ME-09 sets 15,000 tablets of 60 mg per village and 140,000 per district (row 18), and they keep for decades. In an emergency-department trial, one intravenous dose of 10 mg/kg alongside a benzodiazepine protocol cut intensive-care admission from 25 to 8 per cent (51 and 51 patients), with no more adverse events (Rosenson et al. 2013). A 2026 review of 16 non-randomised intensive-care studies found no difference in intubation, at very low certainty (Rizwan et al. 2026). Loading protocols use 8 to 15 mg/kg and are not standardised (Suhotliv et al. 2026).

So one alcohol withdrawal uses about 10 mg/kg, roughly 700 mg or 12 tablets of 60 mg for a 70 kg adult [VERIFY, extrapolated from intravenous use], under a tenth of one per cent of the village stock. The danger is real. A gram is a serious overdose, 2 to 10 g kills, the half-life of about 79 hours means doses pile up, and on top of alcohol it stops breathing (CH-04). No published oral village regimen exists. Protocol P3b is my inference, graded D.

Ethanol itself. When neither drug is held, alcohol treats alcohol withdrawal. A British NHS trust prescribed oral ethanol to 93 patients and compared them with 50 given a benzodiazepine. Admission was less likely with ethanol (odds ratio 0.206, 0.066 to 0.641), though the authors' own review found the wider evidence heterogeneous (Quelch et al. 2024).

A Birmingham NHS harm-reduction leaflet tells drinkers at home to stabilise for a week, then cut by no more than 10 per cent of units a day (10 per cent every 4 days if over 25 units), return to the last comfortable amount if symptoms come back, and space the drinks like a medicine. Stopping outright is reasonable only under 10 units a day with no past fits or hallucinations (Birmingham and Solihull Mental Health NHS Foundation Trust 2020). A UK unit is 10 mL of ethanol, or 25 mL of 40 per cent spirit. This is the village method, because the drink exists and the drug does not. Its weak points are spirit of unknown strength, which ME-03 measures (THRIVING library, ME-03), and a taper the drinker holds himself.

2.6 Thiamine

Wernicke's encephalopathy hides. Of 131 cases found at necropsy, only 16 per cent had shown the classic triad of confusion, unsteady gait and abnormal eye movements, 19 per cent had shown none of the three, and about 80 per cent had not been diagnosed in life (Harper, Giles and Finlay-Jones 1986). The body holds 25 to 30 mg of thiamine, used up in 2 to 3 weeks without intake (THRIVING library, HY-08). Drinkers absorb it poorly.

The rule is thiamine for every dependent drinker in withdrawal, and Mayo-Smith graded it C because the trials are thin, not because there is doubt. The doses are: - oral 200 to 300 mg a day in divided doses, for 6 weeks (NICE CG100, via SPS) - intramuscular 200 to 300 mg daily for at least 3 days - intravenous 500 mg three times daily for 5 days when Wernicke's is suspected (Schuckit 2014)

Vitamin B compound tablets hold too little (SPS). Oral doses up to 200 mg a day are safe, there is no set upper limit, and rare anaphylaxis is a risk of the intravenous route only (Linus Pauling Institute).

Food prevents deficiency but cannot treat it. Pork holds about 0.80 mg per 85 g, and peas, lentils and brown rice about 0.2 mg per half cup (HY-08), against a daily need of 1.1 to 1.2 mg (Linus Pauling Institute). A treatment dose of 300 mg would take about 30 kg of pork. Thiamine is absent from ME-09's decade list as I read it, which is a gap. Give thiamine before feeding a starved drinker (THRIVING library, HY-09). Horsetail destroys thiamine (THRIVING library, PH-01).

2.7 Methanol and the first stills: correcting the brief

The brief names methanol from the first stills as a pitfall. ME-03 found the danger lies elsewhere: - methanol comes from pectin in the mash, so fruit mashes are worst (plum brandy averaged 0.91 per cent) and sugar or grain washes come close to none - cutting the heads does not remove it, and the tails hold it - home stills rarely blind people, because the ethanol in the same glass is the antidote

The mass poisonings, at Pärnu in 2001 (68 dead of 154), in the Czech Republic in 2012 and in Kenya in 2014, came from industrial methanol sold as spirit (THRIVING library, ME-03).

For this report the consequence is narrow. A withdrawal taper uses grain or sugar spirit of measured strength from a known still, never traded or found spirit. A drinker who is getting worse on day 2 to 3 with blurred vision and deep breathing, rather than tremor, is poisoned, not withdrawing, and ME-03's protocol P8 applies.

3. Opioids

3.1 The course

After short-acting opioids, withdrawal starts at 6 to 12 hours, peaks at 24 to 72 hours and ends in 7 to 10 days. After methadone it starts at 24 to 72 hours, peaks at 4 to 6 days and lasts 14 days or more (THRIVING library, ME-05, citing WikEM). The WHO manual gives heroin 8 to 24 hours to onset and 4 to 10 days in all, and methadone 12 to 48 hours and 10 to 20 days. A protracted phase of poor sleep, low mood and craving can run up to 6 months (WHO WPRO 2009).

The Short Opioid Withdrawal Scale scores ten items 0 to 3 (WHO WPRO 2009): - feeling sick - stomach cramps - muscle spasms - feeling cold - heart pounding - muscle tension - aches and pains - yawning - runny eyes - poor sleep

A score of 0 to 10 calls for symptomatic care only, 10 to 20 for symptomatic care or an opioid, and over 20 for an opioid.

3.2 Who dies

Opioid withdrawal itself is "not usually life-threatening" (WHO WPRO 2009). The deaths it causes are from dehydration, mostly in custody where nobody gave water to a vomiting, purging prisoner (Darke, Larney and Farrell 2016, via THRIVING library, ME-05). Stark and Payne-James titled a 2017 paper "People can die from opiate withdrawal" (title only read). Withholding fluids from a vomiting old person for fear of more vomiting is how the deaths happen. Small sips of oral rehydration solution, often, are the answer (THRIVING library, HY-03).

The second death comes later. Once withdrawal is over, tolerance is gone, and a dose the person used to take kills. Drug deaths are 3 to 8 times more frequent in the 2 weeks after prison release (Merrall et al. 2010, via ME-05). Strang et al. (2003) reported the same loss of tolerance after inpatient detoxification (title and summary only). In the Fall the first poppy harvest, or a found cache, meets a body that has lost its tolerance.

Crimea is the nearest natural experiment. When Russia banned substitution therapy, about 800 patients lost methadone and buprenorphine by 20 May 2014. In January 2015 the United Nations envoy Michel Kazatchkine said 80 to 100 of them had died, mostly from overdose and suicide rather than withdrawal itself (Open Society Foundations 2015). That is 10 to 12 per cent in about 8 months.

Pregnant women are the exception to "not life-threatening". The WHO manual advises against withdrawing them, because withdrawal risks miscarriage and premature delivery (WHO WPRO 2009). How the village answers that turns on the book's framing of opioids [OWNER].

3.3 What helps

Fluids first. The WHO manual allows 2 to 3 litres of water a day in opioid withdrawal (WHO WPRO 2009). The home oral rehydration solution is half a level teaspoon of salt and 6 level teaspoons of sugar in 1 litre of clean water (THRIVING library, HY-03, which also resolves the problem of spoon size).

Clonidine, a blood-pressure tablet, cut severe withdrawal against placebo (risk ratio 0.32, 0.18 to 0.57) and nearly doubled completion (1.95, 1.34 to 2.84), on moderate-quality evidence. The review covered 26 trials of 1,728 people, and clonidine did somewhat worse than a tapering opioid (Gowing et al. 2016).

The WHO schedule for clonidine (WHO WPRO 2009): - do not start if blood pressure is under 90/50 or the pulse under 50 - give a test dose of 75 micrograms and recheck the pressure at 30 minutes - day 1: 150 micrograms three times a day - days 2 and 3: 150 to 300 micrograms three times a day - day 4: 75 micrograms three times a day - day 5: 75 micrograms twice a day - stop if the pressure falls under 90/50

It needs a blood-pressure cuff, which puts it at the dispensary, not the hearth.

Loperamide is 4 mg, then 2 mg after each unformed stool, to a maximum of 16 mg a day (WHO WPRO 2009).

A taper with what is left. If the person still has some of their opioid, the WHO rule is to cut 10 to 20 per cent every 8 hours after 7 to 14 days of use, and 10 to 20 per cent a week after longer use (WHO 2012, via ME-05). The WHO codeine schedule falls from 240 mg a day to 30 mg over 10 days (WHO WPRO 2009). The village task is to count the tablets on day 1 and spread them, rather than take them at the old rate until they are gone.

3.4 What the Vietnam veterans show

Lee Robins interviewed a random sample of about 450 enlisted men returning in September 1971, plus about 450 whose urine had screened positive (Robins, Helzer and Davis 1975, abstract). Hall and Weier (2017) give the numbers: - 95 per cent were interviewed and 92 per cent gave urine - 43 per cent had used opiates in Vietnam and about 20 per cent had been dependent - 8 to 12 months after return, 10 per cent had used any heroin and under 1 per cent were re-addicted, confirmed by urine - 5 per cent were re-addicted at some point in three years - by contrast, over 90 per cent of addicts treated in the United States relapsed within a year

Heroin in Vietnam was about 90 per cent pure and cheap, and at home under 10 per cent pure and dear. The men's reasons for not using were fear of addiction, health, arrest and family disapproval. More than a third had alcohol problems at three years, more often former heroin users (Hall and Weier 2017). For the Fall, Robins shows that when supply, price and surroundings all change, most opioid dependence ends and stays ended, that disapproval is part of the treatment, and that the craving moves to whatever is at hand, which in the Fall is the first still.

3.5 The poppy

ME-05 sets out the choice of no poppy, district poppy or household poppy, and Westermeyer's three- to four-fold addiction in poppy-growing Laotian villages (THRIVING library, ME-05). This report adds that the people most at risk from a new poppy are those just through withdrawal, whose tolerance is gone. Whether the opioid-dependent are tapered to nothing or kept on a measured dose from the locked chest turns on how the book frames opioids [OWNER]. Maintenance follows Crimea and the WHO pregnancy advice, a taper follows Robins, and GOVERNING should hold the rule.

4. Benzodiazepines and other sedatives

Sedative withdrawal looks like alcohol withdrawal, slower (WHO WPRO 2009): - after short-acting drugs it starts at 1 to 2 days and lasts 2 to 4 weeks or more - after long-acting drugs it starts at 2 to 7 days and lasts 2 to 8 weeks - fits occur in a minority

Hollister, Motzenbecker and Degan (1961) switched 11 patients on chlordiazepoxide 300 to 600 mg a day abruptly to placebo. Ten had withdrawal and three had fits, on days 7, 8 and 12. Those doses are many times ordinary use, and small series of ordinary-dose patients stopped abruptly reported no fits [VERIFY, secondary summaries only]. Risk rises with short half-life, high dose, long use and several drugs together. I found no reliable incidence figure at ordinary doses. Heather Ashton wrote that abrupt stopping can cause convulsions, psychosis and delirium, that fits are "extremely rare" with a slow diazepam taper, and that perhaps 10 to 15 per cent of long-term users develop a protracted syndrome (Ashton 2002).

Equivalents for 10 mg of diazepam (Ashton 2002):

Drug	Equivalent to diazepam 10 mg
alprazolam	0.5 mg
clonazepam	0.5 mg
lorazepam	1 mg

Drug	Equivalent to diazepam 10 mg
chlordiazepoxide	25 mg
temazepam	20 mg
nitrazepam	10 mg
oxazepam	20 mg
zopiclone	15 mg
zolpidem	20 mg

The WHO manual's table is close but not identical. It gives temazepam and oxazepam a stronger equivalence, so take the lower dose when the two sources differ (WHO WPRO 2009).

The taper. Ashton switches the person to diazepam, which has a half-life up to 200 hours, and cuts about a tenth at each step: - from 40 mg, 2 to 4 mg every 1 to 2 weeks - from 20 mg, 1 to 2 mg steps - from 10 mg, 1 mg steps - from 5 mg, 0.5 mg steps

Coming off 40 mg takes 30 to 60 weeks, and she called six weeks "much too fast" (Ashton 2002). The WHO closed-setting schedules are faster: - stabilise on a diazepam equivalent capped at 40 mg for 4 to 7 days - low-dose schedule: 15, 12.5, 10, 7.5, 5 and 2.5 mg - high-dose schedule: 40, 30, 20, 10 and 5 mg - at least 7 days between steps, and never raise the dose when symptoms worsen

In the Fall the taper the body wants meets the tablets in the drawer, and Ashton's months need more tablets than any household has. Never take them at the old rate until gone and then stop. On day 1 count them, convert to diazepam equivalents and spread them into the longest taper they allow, keeping a reserve against a fit (protocol P7). Pooling every household's sedatives at the dispensary would allow slower tapers and a fit reserve, but it takes private property [OWNER]. People dependent on both alcohol and a sedative carry both risks. Watch them for a week.

5. Tobacco

Withdrawal does not kill. It brings irritability, anxiety, restlessness, poor concentration, hunger, low mood and broken sleep (Hughes 2007), peaking in the first week and fading over 2 to 4 weeks [VERIFY, durations from secondary summaries]. Most relapse after unaided quitting happens in the first 8 days, and only 3 to 5 per cent stay abstinent at 6 to 12 months (Hughes, Keely and Naud 2004). Most smokers will smoke again as soon as there is tobacco.

Medicine levels change when smoking stops. Smoke speeds the breakdown of some medicines in the liver. When a smoker stops abruptly, blood levels of clozapine and olanzapine can rise sharply and become toxic [VERIFY, standard pharmacology, no source read for this report]. MI-05 should note this for anyone still on salvaged antipsychotics.

Growing it is easy, and so is poisoning. *Nicotiana tabacum* leaf holds about 1 to 3 per cent nicotine. *N. rustica*, the older tobacco of the Americas, holds several times more, with figures from about 4 to 15 per cent of dry weight (Sierro et al. 2018, and secondary sources). That makes it the stronger poison for a novice and for a child. In many Native nations rustica is a ceremonial and sacred plant, and that knowledge belongs to its holders (THRIVING library, SY-04).

The killing lookalike is tree tobacco, *N. glauca*, a shrub naturalised from South America around the Mediterranean, in California, Australia and southern Africa. It has blue-green leaves and yellow tubular flowers. Its anabasine kills when the leaves are cooked as greens. A woman in Jerusalem ate them as wild spinach and died on day 20 (Furer et al. 2011), and a Greek woman needed two days on a ventilator (Ntelios et al. 2013).

Green tobacco sickness is nicotine absorbed through the skin from wet leaves at harvest. It brings nausea, vomiting, dizziness and headache, and passes in a day or two. It affected 24 per cent of 182 Latino farmworkers in a North

Carolina season (Arcury et al. 2001, via secondary summary). Harvesting after the dew has dried, in long sleeves and gloves, and changing out of wet clothes, prevents most of it.

The textbook lethal dose of 60 mg traces to doubtful nineteenth-century self-experiments, and the adult lower limit is more like 500 to 1,000 mg by mouth (Mayer 2014) [VERIFY, figures not reread]. Children are another matter: leaf, butts and tobacco water steeped as an insecticide must be kept from them. Whether to grow tobacco is an economic and moral question [OWNER]. Medically, it kills slowly through smoke, its withdrawal is safe, and its harvest and storage poison harvesters and children.

6. Recovery: the movements and the evidence

6.1 Alcoholics Anonymous and Twelve-Step Facilitation

AA needs no supplies, which is why it matters here. The Cochrane review of 27 studies with 10,565 participants compared manualised AA or Twelve-Step Facilitation with other active treatments such as cognitive behavioural therapy. It found more continuous abstinence at 12 months (risk ratio 1.21, 1.03 to 1.42, 2 studies, 1,936 people, high certainty), consistent at 24 and 36 months, with no difference in how much people drank when they did drink, and lower health-care costs (Kelly, Humphreys and Ferri 2020). The comparison was against other treatments, not against nothing. The critic Lance Dodes argues that AA helps a small minority, perhaps 5 to 10 per cent, and harms those it shames (Dodes and Dodes 2014, not read). The Cochrane authors were themselves Twelve-Step researchers, which is a point a reader should weigh, not a reason to dismiss the review.

6.2 Lay counselling

The Counselling for Alcohol Problems trial in Goa trained lay counsellors to deliver a brief psychological treatment to 377 men with harmful drinking, AUDIT scores of 12 to 19. Remission was 36 per cent against 26 per cent (adjusted prevalence ratio 1.50, 1.09 to 2.07), and 14-day abstinence 42 against 18 per cent (Nadkarni et al. 2017). The trial excluded men who needed inpatient detoxification. Counselling comes after the withdrawal is over, never instead of it, and it needs MI-02's district supervision (THRIVING library, MI-02).

6.3 Native sobriety movements, on their own terms

Alkali Lake. Among the Secwepemc of Esketemc, Alkali Lake in the Cariboo region of British Columbia, Phyllis Chelsea stopped drinking in 1971 or 1972 when her young daughter would not come home to a drinking house. Her husband Andy followed and, as chief, confronted the bootleggers (his own relatives among them), replaced cash welfare with vouchers for drinkers, and offered treatment instead of punishment. AA meetings came first, then a return to sweat lodge and Secwepemc spiritual practice. The community and its film *The Honour of All* tell the change as near-universal drinking in the 1960s to 95 per cent sober by the mid-1980s (Windspeaker, undated). Those are the community's own figures, and I found no independent survey. The tradition is a people deciding together, the record is self-report, and science has not measured it.

Wellbriety. Don Coyhis, a Mohican, founded White Bison and the Wellbriety movement, which joins the Twelve Steps to the Medicine Wheel and treats the healing of a person and of a community as one process ("the healing forest"). Its teaching is that "our culture is prevention" (Coyhis and Simonelli 2005, 2008). I found no controlled trial.

A scoping review of cultural interventions for addiction among Indigenous peoples found 19 studies, in the United States and Canada. Sweat lodge appeared in 68 per cent, all combined culture with Western treatment, just over half were quasi-experimental, and 74 per cent reported reduced substance use (Rowan et al. 2014, with Joseph Gone as co-author). The evidence is encouraging and weak, and it describes programmes that belong to particular nations, not methods to lift out.

The Native American Church and peyote. The Church holds peyote, the cactus *Lophophora williamsii* of the Chihuahuan Desert in southern Texas and northern Mexico, as a sacrament, and the Peyote Road forbids alcohol. Among the Navajo (Diné), members describe peyote meetings as a way out of drinking, and an ethnography set them beside Pentecostal healing as two routes to sobriety (Garrity 2000). An early clinical report described peyote meetings in treating alcoholism (Albaugh and Anderson 1974, abstract unavailable). On safety, 61 Navajo members using peyote regularly showed no cognitive or psychological deficits against 79 minimal users, while 36 former alcoholics did (Halpern et al. 2005). The ceremony is the Church's and is not reproduced here (THRIVING library, SY-04). The cactus grows slowly, its wild stands are under pressure, and low spineless lookalikes such as *Astrophytum asterias* exist [VERIFY, not checked]. No village outside the Church has reason to collect it.

Bwiti and iboga. Among the Fang, Mitsogo and neighbouring peoples of Gabon and surrounding countries [VERIFY, peoples named from general knowledge], the root bark of *Tabernanthe iboga* is the sacrament of Bwiti, taken at initiation. The initiation is restricted knowledge, belongs to the Bwiti, and is not described here. Alper, Lotsof and Kaplan (2008) studied the separate medical subculture outside Africa, apart from Bwiti. They estimated 3,414 people had taken ibogaine by February 2006, 68 per cent for substance disorders and 53 per cent for opioid withdrawal. Section 7 gives the deaths.

7. Plants offered as cures

Ibogaine. Nineteen deaths were recorded between 1990 and 2008 outside west central Africa, 1.5 to 76 hours after taking it. In 12 of the 14 with adequate data, heart disease or other drugs contributed (Alper, Stajić and Gill 2012). The authors name the risk of fits when ibogaine is taken during alcohol or benzodiazepine withdrawal, and the uninformed use of crude plant material. A systematic review of adverse events records QT prolongation and the dangerous rhythm torsades de pointes (Ona et al. 2022). Uncontrolled series from Mexico and New Zealand report reduced opioid use (Brown, Noller and Denenberg 2019). Vendor pages quote a death rate of 1 in 300, but I found no primary source for it. The figure of about 1 in 427 in older data also comes through secondary sources [VERIFY]. *T. iboga* does not grow outside central Africa, so the question will not arise in most villages. Where it does, there is no village dose, and no preparation is given here.

Kudzu. The root and flower of *Pueraria montana* var. *lobata* have been used against drunkenness in China for more than a millennium, and its isoflavones cut alcohol intake in hamsters and rats (Keung and Vallee 1998, abstract). In people, 7 days of extract cut beers among 14 heavy drinkers without changing urge (Lukas et al. 2005), and a single dose cut beers from 3.0 to 1.9 in 20 men against a rise on placebo (Penetar et al. 2015). In 19 treatment-seekers over 8 weeks, kudzu cut drinking by 30 per cent and placebo by 44 per cent (Keith et al. 2026). The root starch is a food. As treatment the evidence is grade D, and it does nothing for withdrawal.

8. Stills, opium and the record of control

The record shows what control of supply did in three places: - **Alaska.** In 97 Alaska Native communities, the 89 that banned sale and either import or possession saw accident and homicide deaths fall by 74 and 66 per 100,000. Rates still stayed 2.5 to 7 times national levels (Berman, Hull and May 2000). - **South Africa.** At a regional hospital in Worcester, trauma admissions per 100 days were 95 before the COVID-19 alcohol ban, 39 under the first complete ban, 74 under partial restriction, 40 under the second complete ban and 105 after. Stab wounds moved from 53 to 23, 45, 17 and 60 (Chu et al. 2022). - **Russia.** Mortality fell steeply with Gorbachev's 1985 anti-alcohol campaign and rose when it ended (Leon et al. 1997). One analysis attributes a third to a half of the 1990s mortality crisis to the campaign's end (Bhattacharya, Gathmann and Miller 2013, abstract).

The pattern is consistent. Less drink means fewer deaths from violence and injury, the effect lasts only as long as the control, and its end kills.

So the still is a bigger medical decision than any withdrawal protocol. Who distils, whether spirit is rationed, traded

or held only as medicine and fuel, and whether the village is dry, damp or wet are for the owner and GOVERNING [OWNER]. ME-03 shows the dispensary needs a still for antiseptic, tinctures and fuel (THRIVING library, ME-03), so even a dry village keeps one. Opium follows the same logic (ME-05).

Evidence grades

Practice	Grade	Basis
Benzodiazepine for moderate or severe alcohol withdrawal prevents fits and delirium	**A**	Amato 2010, Mayo-Smith 1997
Dosing by score, or loading, uses less drug for the same safety	**B**	Saitz 1994, Sellers 1983
Phenobarbital 10 mg/kg once, intravenous, with benzodiazepine	**B**	Rosenson 2013, Rizwan 2026 very low certainty
Oral phenobarbital front-loading in a village (P3b)	**D**	My extrapolation, no trial
Supervised taper with the drinker's own alcohol	**C**	Quelch 2024 observational, NHS harm-reduction practice
Thiamine for every dependent drinker	**C**	Grade C for lack of trials (Mayo-Smith), harm near zero
Antipsychotic alone for delirium, or paraldehyde	**X**	Kaim 1969, Thompson 1975
Lifelong phenobarbital after one withdrawal fit	**X**	CH-04
Unwatched abrupt stop of heavy drinking	**X**	Schuckit 2014, WHO 2009
Fluids and oral rehydration in opioid withdrawal	**B**	Darke 2016 (deaths from dehydration), WHO 2009
Clonidine for opioid withdrawal	**B**	Gowing 2016, moderate quality
Loperamide for withdrawal diarrhoea	**C**	WHO 2009 consensus
Slow benzodiazepine taper rather than abrupt stop (rates: C)	**B**	Hollister 1961, Ashton 2002, WHO 2009

AA and Twelve-Step Facilitation for abstinence | **A** | Kelly 2020, high certainty against active treatments |
Lay counselling for harmful drinking after withdrawal | **B** | Nadkarni 2017, one trial |
Community sobriety movements (Alkali Lake, Wellbriety) | **C** | Self-reported record, scoping review (Rowan 2014) |
Peyote within the Native American Church | **C** for sobriety, **B** for safety in members | Garrity 2000, Halpern 2005 |
Ibogaine in a village | **X** | Alper 2012, Ona 2022 |
Kudzu against drinking | **D** | Lukas 2005, Penetar 2015, Keith 2026 null |
Local alcohol bans cut injury and violent deaths | **B** | Berman 2000, Chu 2022, Leon 1997 |

Means ledger

Rung	What is possible	What it changes
Hands	A watcher, a written WHO AWS score three or four times a day, turning a fitting person onto the side, sips of fluid, a calm room, knowing the 6 to 48 hour fit window and the day-3 delirium window	Prevents the face-down fit and the dry death. Finds delirium early
Hearth	Oral rehydration solution from salt and sugar, warmth, thiamine-rich food (pork, peas, lentils, whole grain), a family that holds the bottle or the tablets	Opioid withdrawal becomes survivable at home. Prevents thiamine deficiency, cannot treat it
Garden and still	Spirit of known strength from grain or sugar wash for a taper. Tobacco if the village chooses it, and the green tobacco sickness that comes with it. Kudzu as food	The ethanol taper is the only withdrawal treatment the village can make. The still is also the source of the next dependence
Village dispensary (300)	200 mg diazepam per decade (ME-09), phenobarbital 60 mg tablets in thousands, a thermometer, a blood-pressure cuff, salvaged clonidine and loperamide, a pooled and counted stock of household sedatives and opioids if the owner allows	One or two diazepam courses, and phenobarbital front-loading for the rest. Counted tapers
District infirmary (3,000)	20,000 mg diazepam, injectable thiamine, intravenous fluids, intramuscular phenobarbital, a supervising clinician for lay counsellors (MI-02), a locked chest of opioids (ME-05)	Delirium treatable. Wernicke's treatable. Maintenance or taper for opioid dependence, by the owner's rule
Hospital before the Fall	Unlimited benzodiazepines, intensive care and intubation, intravenous phenobarbital, opioid substitution therapy, naltrexone and acamprosate	Delirium mortality 1 to 4 per cent (Schuckit 2014)

Harm test

- **Undertreating** alcohol withdrawal kills through fits and delirium. **Overtreating** with a sedative on top of drink stops breathing. The score and the breath count guard against each.
- **The ethanol taper** puts spirit into a dependent person's house and risks a taper that never ends, but it is a treatment where none other exists.
- **A rushed sedative taper** risks fits and psychosis. A slow one uses tablets the village lacks.
- **Opioid maintenance** keeps people alive through pregnancy and the first year, as Crimea suggests, but keeps the chest in demand.

- **Ibogaine** kills through the heart, and through fits in people still in withdrawal.
- **Prohibition** saves lives while it holds, drives trade underground, and its end kills (Leon et al. 1997).
- **Peyote outside the Church** loses the setting on which its safety and sobriety evidence depends.

Red flags

Send for help, or move the person up a rung, at once if any of these appears: - Any fit in a drinker or sedative user, a second fit, or a fit outside 6 to 48 hours from the last drink. - Confusion about place or day, or temperature over 38.0, after day 2 of alcohol withdrawal: delirium until shown otherwise. - AWS 15 or more, or pulse over 100 with systolic over 150 in a high scorer. - Unsteady walk, double vision or new confusion in any drinker: Wernicke's, thiamine before food. - Blurred vision or deep fast breathing after found or traded spirit: methanol (ME-03, P8). - Under 10 breaths a minute, or not rousable, after a sedative: withhold and open the airway (CH-04). - In opioid withdrawal, no urine for 12 hours, confusion or fainting in an old person or child: dehydration. - A pregnant woman in opioid or alcohol withdrawal. - The first dose at the old level after any withdrawal: the overdose window. - Suicidal thoughts in withdrawal or early recovery (MI-02).

The case against

- **Against the Vietnam lesson.** Griffith Edwards called Robins's work research driven by national anxiety, and some suspected a whitewash (Hall and Weier 2017). The men were young conscripts who mostly began using in Vietnam. A middle-aged villager on prescribed opioids for pain is a different case.
- **Against AA.** Lance Dodes argues that AA's real success rate is small and that it shames those who fail (Dodes and Dodes 2014, not read). The Cochrane comparisons were against other treatments, not against nothing.
- **Against cultural interventions as evidence.** The achievements are recorded by the communities themselves, in mainly quasi-experimental designs (Rowan et al. 2014). The movements answer that sovereignty over healing, not a trial, is the point. That answer is coherent and untested here.
- **Against dosing by score in a village.** The trials used trained nurses. A new watcher may score low to save stock, and a fixed schedule may be safer.
- **Against the ethanol taper.** Much of the hospital evidence comes from one trust (Quelch et al. 2024), and many clinicians reject alcohol as hard to dose and easy to divert.
- **Against oral phenobarbital front-loading.** No trial exists, the half-life is long, and a mistake cannot be reversed without a ventilator. A low ceiling and a strict breath count reduce the risk without removing it.
- **Against this report's arithmetic.** It rests on rich-country peacetime prevalence. A region with heavy illicit opioid use would see more.

10-line summary

1. Alcohol and sedative withdrawal kill. Opioid withdrawal kills through dehydration and later overdose. Tobacco withdrawal does not.
2. Per 300: 5 to 10 dependent drinkers, about 6 long-term sedative users, a handful on opioids, about 45 smokers [VERIFY].
3. Alcohol fits come at 6 to 48 hours, delirium from about day 3. Score the WHO AWS three or four times a day.
4. A withdrawal fit is not epilepsy. Do not start lifelong phenobarbital.
5. One moderate withdrawal uses 60 to 140 mg diazepam, one delirium over 2,000 mg. The village's 200 mg covers one or two.
6. Phenobarbital, held in thousands, is the realistic village sedative: about 10 mg/kg per withdrawal, with a breath count.
7. Without drugs, taper on measured spirit, cutting a tenth of the starting amount a day.
8. Thiamine for every drinker. Food prevents deficiency but cannot treat Wernicke's.
9. Opioid withdrawal needs fluids, warmth and counted tapers. The deaths come later, when tolerance is gone.

10. Count sedatives on day 1 and stretch them into a taper. The still and the poppy are for GOVERNING [OWNER].

Open questions

- Which oral phenobarbital regimen is safe for alcohol withdrawal without monitoring? None found.
- How often do ordinary-dose benzodiazepine users fit when stopped abruptly? No reliable figure found.
- Untreated delirium mortality before sedatives, from a primary source? Figures of 15 to 37 per cent circulate untraced.
- Should ME-09 add thiamine, and raise diazepam or name phenobarbital for alcohol withdrawal?
- Do Alkali Lake's results hold under independent measurement?
- Maintain or taper the opioid-dependent, including pregnant women [OWNER]?

Sources to read in full

- Schuckit 2014 (read): the clearest short account of delirium.
- WHO WPRO 2009 (read): village-ready dose tables for alcohol, opioids and sedatives.
- Ashton 2002 (chapters 1 to 3 read): the rest, for sedative tapers.
- Mayo-Smith 1997 and Kelly, Humphreys and Ferri 2020 (not read in full).
- Robins, Helzer and Davis 1975 (abstract only), behind Hall and Weier 2017.
- Berman, Hull and May 2000 (abstract only), before GOVERNING sets any alcohol rule.
- Fernandez 1982 on Bwiti (not read), so the iboga tradition is described by those who hold it, within what they allow.

At the bedside after the Fall

A heavy drinker has had nothing for a day. He shakes, sweats and cannot keep food down. A watcher scores him on the WHO scale every six hours with a thermometer and writes it down. He sips oral rehydration solution and gets thiamine, or failing tablets, pork and peas. If the score passes 5, the dispensary gives diazepam by score while it lasts, or front-loads phenobarbital with a breath count, or gives measured spirit, held by someone else and cut by a tenth a day. If he fits, they turn him on his side, time it, and do not call it epilepsy. If on day 3 he does not know where he is and is feverish, it is delirium, and he goes to the district. An old woman on nightly lorazepam counts her tablets with the dispensary on day 1 and gets a written taper. A young man without heroin is kept warm and given fluids for a week, and told that his old dose would now kill him.

Feasible today against after the Fall. Today every step has a better version: intravenous fluids, unlimited benzodiazepines, injectable thiamine, intensive care, substitution therapy. After the Fall the watcher, the score, the fluids and the counted tapers remain, and all are cheap. Sedatives shrink to what was salvaged, phenobarbital outlasts diazepam, and the new risks are the still and the poppy.

Protocols

P1. First-week triage (village, days 0 to 7) 1. Day 0: ask every household who drinks daily, who takes a sleeping or nerve tablet daily, who takes a painkiller daily, and who smokes. Write the names down. 2. Over 10 UK units a day (250 mL of 40 per cent spirit), or any past fit, hallucinations or delirium: must not stop unwatched. Start P2. 3. Sedative and opioid users: count tablets the same day, then P6 or P7. 4. Dependent pregnant women go to the district.

P2. The withdrawal watch (alcohol and sedatives) 1. One named watcher, in shifts, for 3 days (alcohol) or 7 days (sedatives or mixed). 2. Score the WHO AWS at 08, 14, 20 and 02 hours, with temperature, pulse and breaths a minute, in writing. 3. Fluids 2 to 4 litres a day, as oral rehydration solution if vomiting (HY-03). Thiamine as P5

from day 1. 4. AWS 1 to 4: watch. AWS 5 to 14: P3 or P4. AWS 15 or more, confusion, or temperature over 38.0: treat now and send to the district. 5. A fit: on the side, time it, note hours since the last drink. Rescue doses only as CH-04 protocol 2, never a third.

P3a. Diazepam, when held 1. By score: 10 to 20 mg when AWS is 5 or more, re-score at 1 to 2 hours. Or load: 20 mg every 2 hours to drowsy but rousable, usually 60 to 80 mg, never over 120 mg in 24 hours without the district. 2. After loading: 10 mg four times on day 2, twice on day 3, 5 mg twice on day 4 (Haber et al. 2021). 3. Before every dose: rousable to voice and at least 10 breaths a minute, or withhold.

P3b. Phenobarbital front-loading when no diazepam is held [VERIFY, grade D, my inference] 1. Only if the person is sober now (no drink for 6 hours or more), rousable, and breathing 12 or more a minute. Not in liver failure, not in pregnancy, not with other sedatives on board. 2. Give 120 mg (two 60 mg tablets) by mouth. Re-score and count breaths at 2 hours. 3. Repeat 120 mg every 2 to 4 hours while AWS is 5 or more, up to a total of 10 mg/kg in 24 hours, about 700 mg (12 tablets) for 70 kg. Never more than 15 mg/kg. 4. Withhold any dose if the person is not rousable to voice, breathes fewer than 10 a minute, or has drunk alcohol. 5. Give no routine further doses. The long half-life tapers itself. On days 2 to 3, give 60 mg only if AWS is 5 or more and rule 4 is met. 6. Record each tablet. Watch for 48 hours after the last dose.

P4. Taper with measured spirit, when no drug is held 1. Grain or sugar spirit of measured strength from a known still only (ME-03). One UK unit is 25 mL of 40 per cent spirit. 2. Find the daily amount that keeps AWS under 5, split into 4 to 6 doses, and hold it for 2 to 3 days. 3. Cut by one-tenth of the starting amount a day, ending in about 10 days. Over 25 units a day, or if symptoms return, cut every 2 to 4 days. 4. A named person other than the drinker holds the bottle and gives each dose. 5. A fit, confusion or fever: back to the last comfortable dose, and send to the district.

P5. Thiamine 1. Every dependent drinker: 100 mg by mouth three times a day for 6 weeks. 2. Confusion, unsteady gait or abnormal eye movements: give before any food or sugar, and send to the district for injection. 3. No tablets: pork, peas, lentils and whole grain daily (HY-08), which prevent but do not treat.

P6. Opioid withdrawal 1. Warmth, rest, a bucket and water. Fluids 2 to 3 litres a day, oral rehydration solution in small frequent sips with vomiting or diarrhoea (HY-03). In the old and in children, check urine and alertness every 4 hours. 2. Loperamide 4 mg, then 2 mg per unformed stool, at most 16 mg a day. 3. Clonidine only with a cuff, by the WHO schedule in section 3.3. 4. Opioid still in hand: count it and taper 10 to 20 per cent a week. 5. On discharge, say plainly: "Your old dose will now kill you." 6. Pregnancy: send to the district. Maintenance is the owner's rule [OWNER].

P7. Counted benzodiazepine taper 1. Count the tablets. Convert the daily dose and the stock to diazepam equivalents (section 4). 2. Keep a reserve of 2 days at the full dose for a fit or a crisis. 3. Spread the rest. Worked example: lorazepam 1 mg twice a day (20 mg diazepam equivalent), 30 tablets. Reserve 4 tablets. Then week 1: 1.5 mg a day (10.5 tablets). Week 2: 1 mg (7). Week 3: 0.5 mg (3.5). Week 4: 0.5 mg every other day (2). That uses 23 tablets plus the 4 in reserve. 4. Do not raise the dose when symptoms worsen. Hold the step for an extra week instead. 5. Mixed alcohol and sedative dependence: P2 watch for 7 days.

P8. Tobacco 1. Withdrawal is safe and the first week is the worst. 2. Watch anyone on clozapine or olanzapine for drowsiness and confusion after stopping [VERIFY]. 3. If grown [OWNER]: harvest dry leaves in sleeves and gloves, change out of wet clothes, store leaf and tobacco water away from children. 4. Never eat any *Nicotiana* leaf. Teach tree tobacco by sight.

P9. Governance questions for GOVERNING [OWNER] 1. Dry, damp or wet, and who distils. 2. Whether spirit is held for medical tapers and antiseptic only, or rationed for drinking. 3. Whether household sedatives and opioids are pooled at the dispensary. 4. Whether the poppy is grown, and whether the dependent are maintained or tapered (ME-05). 5. Whether tobacco is grown.

Numbers to carry

Number	Meaning
6 to 48 hours	Alcohol withdrawal fit window
Day 3	Delirium usually begins (range 2 to 4)
1 to 4 / up to 35 per cent	Delirium deaths with / without treatment
AWS 5	Treat. 15: severe, send to the district
60 to 80 mg	Diazepam loading dose that usually works
140 mg	WHO fixed course of diazepam
over 2,000 mg	Diazepam that one delirium can need
200 mg	ME-09 village diazepam allowance per decade
10 mg/kg	Phenobarbital per alcohol withdrawal (about 12 tablets of 60 mg)
10 breaths a minute	Withhold the sedative below this
10 per cent a day	Alcohol taper rate (one UK unit is 25 mL of 40 per cent spirit)
100 mg three times a day	Oral thiamine for 6 weeks
2 to 3 L	Daily fluid in opioid withdrawal
16 mg	Loperamide daily maximum
90/50	Do not give clonidine below this
3 to 8 times	Overdose risk in the 2 weeks after withdrawal or release
under 1 per cent	Vietnam veterans re-addicted in the first year
1 to 3 / 4 to 15 per cent	Nicotine in *N. tabacum* / *N. rustica*

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