None of the medications that I am discussing require a special licence to prescribe. These are all accessible to family physicians.

I've put Ontario-centric info in italics.

Definitions

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.

Addiction medicine is, at least in part, the study of how to relieve these withdrawal symptoms and provide support for patients in their sobriety.

WIthdrawal is the collection of symptoms that present when a person is without a substance that they have become physically dependent upon. The symptoms range from feeling vaguely uncomfortable to life threatening such as seizures. The best way to predict how your patient's withdrawal will progress is to review how their past withdrawals have gone. Finding out what their symptoms were like will allow you to help your patient decrease their discomfort and reduce their risk of relapse.

Dependence on a substance is characterized by the symptoms of withdrawal being lessened when the substance of choice is taken. The relief of withdrawal symptoms that is provided by someone's drug of choice is a reward, reinforcing the need one feels for that drug, and the addiction is strengthened.

General Principles for Treating Patients with Addiction

Just like we do with cigarette smokers, those with other substance use disorder should routinely be offered treatment for this disorder. Acknowledge that addiction is a disorder and not a moral failing. Titrate the dose of the medication you are using to treat addiction until the cravings are mild and the patient is abstinent, or side effects necessitate a change in treatment. Your patient will likely need to be on anti-craving medications for at least 6 months.

Addiction is a chronic illness and our patients deserve to be treated as though it is. Follow up to ensure desired outcomes have been reached are just as important in these patients as it is for the ones with Diabetes. Specialists exist to help with treatment plans. *Refer to the RAAC clinics, or send an eConsult through the OTN hub.*

Billing for addictions in the office can be done through the K code K680. Provided you are counselling your patient for 20 minutes, this will be an out of basket payment for you. Diagnostic codes are 303 for alcohol use disorder, and 304 for all other substance abuse disorder. Consider adding GAD7 and PHQ9 to your ongoing monitoring of your patients to ensure you are also treating any comorbid mental health issues that are uncovered in sobriety.

General Principles for Treating Withdrawal

Reduce withdrawal symptoms to reduce risk of relapse. Implement structure and balance into the patients' days - sleep regularly, eat regularly (real food, not chips and pop), socialize daily with sober friends and allies, gentle exercise daily (e.g. yoga, going for a walk). Make it possible for your patient to be in contact with treatment team or with community supports (see resource section below). Manage expectations (review signs and symptoms of withdrawal and how long they will last, including volatile emotions). Manage cravings medically and with coaching, reminding the patient that it won't last and helping them work through it. Suicide is real concern during detoxification and withdrawal. Help your patient create a safety plan. Use inpatient treatment for patients who are medically unstable. Assist patient with creating a safe recovery environment at home. Have them get rid of drugs and paraphernalia (can induce spontaneous withdrawal. Ask family and cohabitants to be on board - everyone should stay sober. A good grocery list will include ibuprofen, acetaminophen, water, Gravol, Imodium, books, movies, clean laundry.

Treating Alcohol Withdrawal

Use the CIWA protocol when a patient is admitted to hospital and to help your patient to understand what to expect. And when to self administer diazepam if that is the way you choose to proceed. If you choose diazepam, daily release is recommended to avoid misuse. But if your patient requires diazepam, it is likely best that they be admitted to a withdrawal management program.

If patient is in mild withdrawal, consider prescribing gabapentin 300 mg PO tid for 1 week

- Gabapentin reduces subacute withdrawal symptoms (anxiety, insomnia, dysphoria, craving) and relapse rates by curbing cravings. Will also work to increase the seizure threshold.
- May want to extend prescription to help with ongoing alcohol cravings.
- Consider adding a anti-craving medication at the same time.

Thiamine - 100mg PO daily for 5 days, try to start before patient eats their first meal in sobriety.

Anti-Craving Medications (Alcohol)

The medications I offer to help with cravings for alcohol are:

1. Naltrexone - acts to block the opioid receptor, reduces euphoric effect from substance and behaviours of abuse (may be helpful in multiple substance use disorders including binge eating).
    a. Dosing: 25mg daily for 3 days (to minimize GI disturbance), then 50mg daily. Can titrate up to 100 or 150mg daily. *Abstinence is not required to start naltrexone. You do not need a special license to prescribe it.*
    b. Side effects: nausea, headache, dizziness, insomnia, sedation, anxiety (most of these disappear after a few days); blocks effects of opiates; may cause elevations in AST and ALT but in practice, there's an improvement due to less alcohol intake (do LFTs at baseline and after a month)
    c. Contraindications: pregnancy; chronic opiate use; discontinue if AST and/or ALT increases by more than three times baseline at the month check point

    d. *LU 532 "For the treatment of AUD in patients who meet clinical criteria for AUD; express a commitment to reduce or abstain from alcohol; and have confirmed participation in counselling and treatment for AUD"*
    e. Stopping the medication: If taking 150mg or 100mg, taper down to 50mg then off over a few weeks. Maintain treatment for at least 6 months.
2. Acamprosate - glutamate antagonist that works to decrease subacute withdrawal symptoms of insomnia, craving, dysphoria
    a. Dosing: 666mg TID (if renal impairment or weigh less than 60kg, then 333 TID). Patient will get better effect if abstinent for several days before initiating.
    b. Side effects: diarrhea
    c. Contraindications: pregnancy, renal impairment
    d. *LU 531 "For the treatment of AUD in patients who meet clinical criteria for AUD; express a commitment to abstain from alcohol; have been abstinent from alcohol for at least 3 days prior to starting acamprosate; and have confirmed participation in counselling and treatment for AUD"*
    e. Stopping the medication: can be stopped all at once . Maintain treatment for at least 6 months.
3. Gabapentin - modulates dopamine (likely affecting the reward pathway), also effective in those who are triggered to drink by anxiety
    a. Off label use.
    b. Dosing: initially 300mg BID - TID, evidence for decreasing alcohol cravings at 1500/day, consider working towards 600mg TID if tolerated. Lyrica is also effective in some patients.
    c. Side effects: dizziness, sedation, nervousness, ataxia, edema
    d. Stopping the medication: needs to be weaned off, use similar dosing as the initial taper up. Maintain treatment for at least 6 months.
4. Disulfuram - causes a buildup of acetaldehyde in the system which will induce vomiting in the presence of alcohol.
    a. Dosing: 250mg PO daily; Want 24 - 48 hours between last drink and first pill; 7 - 10 days between last pill and first drink. Can be used PRN for events that may trigger a relapse.
    b. Side effects: with alcohol - vomiting, headache, flushed face; without alcohol - headache, anxiety, fatigue, acne, can cause peripheral neuropathy in prolonged use
    c. Contraindications: pregnancy, cirrhosis, unstable CVD
    d. This is a medication that needs to be compounded. I am told by patients it costs about $45/month.
    e. Stopping medication: can be stopped at once
5. Topiramate - modulates the GABA system; may help with sleep and mood in post acute withdrawal period; also indicated for binge eating disorder
    a. Off label use
    b. Dosing: start with 25mg BID for the first week, increase weekly as tolerated to a total of 300mg daily total (split into BID dosing) by week 5-14. Renal dosing at 50% and slower titration.
    c. Side Effects: sedation, dizziness, speech changes, ataxia, mood changes (improve with time), weight loss

d. Contraindications: low weight patients, use with caution with renal impairment
e. Stopping the medication: needs to be weaned off, use similar dosing as the initial taper up. Maintain treatment for at least 6 months.

Treating Opiate Withdrawal

Like with alcohol, there is a scale to help assess the severity of a patient's withdrawal from opiates. The COWS score is a mix of subjective and objective criteria that can be used clinically to direct treatment. Symptoms start about 6 hours after the last use of a short acting opiate. They will be worst at 48 to 72 hours, and start to resolve at about 7 days. Symptoms include myalgias, chills, diaphoresis, nausea and vomiting, rhinorrhea, lacrimation, piloerection, abdominal cramping, diarrhea; insomnia, irritability, dysphoria. Signs include diaphoresis, yawning, lacrimation and rhinorrhea, restless behaviour.

Untreated withdrawal can lead to suicide and/or relapse. Remember that our patients' tolerance to opiates drops precipitously within a few days of their last use.

The medications I use:

1. Trazodone - 100mg qhs for 3 - 5 days for sleep
2. Clonidine - general withdrawal symptoms, especially autonomic symptoms (the creepy crawlies)(Off label use) Plan on 0.1mg up to QID for 4 days. Do not give if your patient has low blood pressure. Side effects include sedation, dizziness.
3. Gabapentin - for irritability, 300mg BID to TID PRN for one week, then reassess need to continue
4. Decongestant spray for up to 1 week
5. Buprenorphine - give once patient has moderate withdrawal symptoms. Will take away most symptoms plus reduce cravings considerably. See below for details.

Treating Opiate Cravings

Buprenorphine -

a. easy to prescribe - review course over a weekend http://www.suboxonecme.ca/
b. Office induction - see patient and confirm that they are in moderate opiate withdrawal. Write the initial script for 4mg, then have patient return to office to be reassesed in 2 hours. As long as the patient is improved but not in withdrawal, give another script for 4 mg. Write a script for the next day or two for the dose you are starting on (4 - 8 mg) until able to be assessed again in the office. TItrate the dose to minimize cravings. Increase dose by 2 - 4 mg at each visit if patient is having symptoms of withdrawal or cravings near the end of their dosing interval. Decrease if sedation occuring. Doses of 8 to 16 mg are usual for most patients. Maximum is 24 mg.
c. Comes in tabs of 2mg and 8mg
d. *Prescriptions require:*
    i. *Patient's full name*
    ii. *Patient's health card number*

    iii. *Your CPSO number*
    iv. *The dates you are prescribing the medication (e.g. November 7 to November 20 inclusive)*
    v. *Specify if dose is to be observed or to be taken home*
    vi. *Specify total number of each size tab required and the number to be dispensed each time (e.g. Q: 6x2mg tabs and 3x8mg tabs M: 2x2mg and 1x8mg tabs daily, witnessed dosing)*
e. If your patient fails buprenorphine (doesn't work for everyone), refer to a methadone clinic.
f. Do urine drug screens for broad spectrum toxicology to ensure patient is taking the medication
g. Have frequent office visits for urine screening, counselling. Ask about mood and function. Encourage community supports and counselling. Keep doing the usual primary care maintenance (paps, immunizations, etc.)
h. I generally do daily dispense for at least 2 weeks (to a month if I don't know the patient). If the patient has been reliable, then will increase to twice weekly dispensing, then to weekly dispense. I do not give more than a week at a time. Reasons to extend daily dispensing - injects or crushes tablets, buys, sells, and uses street drugs.
i. Stopping the medication: Maintain patient on a dose that minimizes cravings for at least 6 months before attempting to decrease the dose. Wean off slowly, at 1 - 2 mg every 2 weeks.
j. If patient relapses following a taper or stopping buprenorphine, return to original dose (using a similar taper up).

<u>Treating Stimulant Withdrawal</u>
Managing expectations is very important with this class of drugs. Patients will need to sleep and eat. They will need to remember moderation in eating or they may make themselves unwell. They should also expect depression (can be severe), anxiety, fatigue, decreased concentration, increased appetite, increased dreaming.

If your patient has stimulant induced psychosis, it is reasonable to use olanzapine. I usually start at 2.5mg BID. It has been shown to be better tolerated than other anti-psychotics and have fewer side effects. Seroquel is also used with good effect. No head to head study has been done yet comparing the two. Consider a psychiatry referral.

Medications: there is emerging evidence that **clonidine** is helpful, especially for young women with trauma histories (Off label use). Dosing is 0.1mg TID regularly for about a month. Ensure they are not hypotensive before starting. Consider an antidepressant if severe or persistent depression. Many prefer buproprion for the dopamine action. Gabapentin may be helpful for anxiety symptoms. (off label use).

<u>Treating Stimulant Cravings</u>
There is mixed evidence for medications like Concerta and Vyvanse. If this is the route you go, ensure that it is a long acting med. Similarly, mixed evidence for buproprion.

I have found naltrexone to be VERY effective for folks with SUD who want to stop using. Evidence is still evolving here. Can also be used for behavioural addictions such as shoplifting, gambling.

Essentially though, psychoeducation and addictions counselling is most strongly recommended.

Resources

Metaphi - a free education resource for clinicians, go to the provider section for information. Includes a very helpful handbook on treating addiction. www.metaphi.ca

Free online addictions diploma:
https://www.bccsu.ca/about-the-online-addiction-medicine-diploma/

CIWA (alcohol withdrawal scoring):
https://www.womenscollegehospital.ca/assets/pdf/MetaPhi/CIWA%20scale.pdf

COWS (opiate withdrawal scoring):
https://www.aoaam.org/resources/Documents/Clinical%20Tools/Clinical_opiate_withdrawal_s.pdf

OTN Hub - there are several addictions medicine physicians who take econsults

Suboxone CME - http://www.suboxonecme.ca/

RAAC: http://raacww.ca/ (Rapid Access Addictions Clinics)

Community Withdrawal Support Services: 1-844-722-2977

House of Friendship: https://www.houseoffriendship.org/ (Day programs, residential programs, counselling)

Stonehenge Therapeutic Community: https://stonehengetc.com/ (residential treatment, outreach counselling and withdrawal support)

CADS (outpatient addictions counselling in Guelph, Fergus, Mount Forest, Orangeville through Homewood):
https://homewoodhealth.com/health-centre/resources/community-addiction-service/overview

SBIRT for counselling patients with use disorders:
http://www.cfpc.ca/uploadedFiles/Resources/_PDFs/CFPCCCSA%20Alcohol%20Screening%20Brief%20Intervention%20and%20Referral.pptx.pdf