



DROWSY WITHOUT FEELING LOUSY.

**A toolkit for reducing inappropriate use of
benzodiazepines and sedative-hypnotics
among older adults in primary care**

Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.

Canadian Geriatrics Society, Choosing Wisely Canada recommendation #2.
Canadian Society for Hospital Medicine, Choosing Wisely Canada recommendation #3.

Don't routinely continue benzodiazepines initiated during an acute care hospital admission without a careful review and plan of tapering and discontinuing, ideally prior to hospital discharge.

Canadian Psychiatric Association, Canadian Academy of Geriatric Psychiatry, Canadian Academy of Child and Adolescent Psychiatry, Choosing Wisely Canada recommendation #9.

Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia.

Canadian Psychiatric Association, Canadian Academy of Geriatric Psychiatry, Canadian Academy of Child and Adolescent Psychiatry, Choosing Wisely Canada recommendation #13.



Inspiration for this toolkit

Successful de-prescribing of benzodiazepines and other sedative hypnotics (BSH) medications in the community setting has been demonstrated by Dr. Cara Tannenbaum in Montreal.¹ The EMPOWER Cluster Randomized Trial engaged patients at their pharmacy when they were renewing these medications. In the intervention group, a simple patient empowerment pamphlet ([Resource 1](#)) was given to patients by the pharmacist. This contained evidence-based information on harms versus benefits of BSH medications, and a stepwise tapering tool. It was written in simple English or French ([Resource 1](#)). In the control group, patients received usual pharmacy information with their prescription.

Of the 303 patients, 86% were followed up at six months. In the group receiving the empowerment pamphlet, 62% had initiated a conversation with either their pharmacist or primary care provider about the safety of the medication. 11% of patients reduced their dosage. Impressively, 27% of patients discontinued the BSH. This compared to 5% who discontinued in the control group.

This study showed that when patients are given direct information about risks and benefits, it led to shared decision-making around the overuse of medications that increase the risk of harm.¹ Dr. Tannenbaum has made the patient empowerment pamphlets publicly available for other clinicians to use ([Resource 1](#)).



Introduction

This toolkit was created to support the implementation of interventions to reduce long-term prescription of benzodiazepines and other sedative hypnotics (BSH) medications in the community (e.g. primary care). It can be used by clinicians in community practice to help improve patient safety related to overprescribing. There are a number of sedative-hypnotics, benzodiazepines and “Z” drugs, that may have risks for older adults and should be flagged and reviewed when used long-term:

Alprazolam (Xanax)	Flurazepam (Dalmane)	Trazodone (Oleptro)
Bromazepam (Lectopam)	Lorazepam (Ativan)	Triazolam (Halcion)
Chlordiazepoxide (Librax)	Nitrazepam (Mogadon)	Zolpidem (Sublinox/Ambien)
Clonazepam (Rivotril)	Oxazepam (Serax)	Zopiclone (Imovane)
Clorazepate (Tranxene)	Quetiapine (Seroquel)	
Diazepam (Valium)	Temazepam (Restoril)	



Make sure this toolkit is right for you

This toolkit is suitable for your practice setting if you have confirmed that you have patients – especially those over age 65 - that are using BSH chronically. In general, the prevalence of continuous BSH use (for at least 90 days) among seniors is between 10-20% in most Canadian provinces.²



Key ingredients of this intervention

This toolkit may help clinicians in community practice reduce the use of BSH among older adults by introducing the following changes:

1. Assembling an inter-professional team
2. Achieving consensus regarding indications, risks and benefits for BSH
3. Identifying patients currently taking BSH
4. Engaging patients in shared decision-making
5. De-prescribing BSH with patients who are ready
6. Alternatives to BSH

Assembling an interprofessional team

If you practice in a team setting, consider engaging physicians, pharmacists, nurses, physician assistants and social workers to be part of the project. These providers have frequent contact with patients who need chronic disease management. Their positive working relationships will help with patients' health promotion and reinforcing messages about the risks of BSH. They can provide telephone or in-person follow-up after a specified duration of time, to see how the tapering effort is going, and to help patients troubleshoot withdrawal symptoms. For all these reasons, it is important to assemble a project team with inter-professional representation.

If you don't practice in a team setting, consider engaging community pharmacists in your neighbourhood. Pharmacist input is extremely valuable in reducing unnecessary BSH use. Pharmacists can identify inappropriate prescriptions for BSH and provide education for patients and caregivers on safer alternatives. Structured medication reviews can be an effective strategy to reduce inappropriate BSH prescriptions.

Achieving consensus regarding indications, risks and benefits of BSH

Achieving consensus among clinicians is important before starting the intervention. Some evidence-informed material to consider is presented here:

Appropriate indications for prescription of sedative-hypnotics

- Seizure disorder
- Alcohol withdrawal

Risks of long-term sedative-hypnotic use

- Motor vehicle accidents
- Impaired memory and attention
- Confusion / delirium
- Falls
- Hip fractures
- Hypoventilation
- Death
- Tolerance to sedative effects
- Withdrawal syndrome

Benefits of sedative-hypnotic use for sleep³

- 23 additional minutes of sleep per night

NNT = 13

The number of patients who would need to be treated with a sedative-hypnotic for one patient to have an improvement in sleep quality is 13.

NNH = 6

The number of patients who would need to be treated with a sedative is 6.

Glass, et al., 2005, BMJ, doi:10.1136/bmj.38623.768588.47

Identifying patients currently taking BSH

Older patients taking BSH can be identified and engaged whether your practice has EMR or paper charts.

For a **paper-based (or EMR) practice**, patients can be identified:

1. At the time of preventive health exam

When performing routine medication reconciliation, eligible patients can be engaged in an introductory conversation. The BSH brochure ([Resource 1](#)) can be given to them in paper form, or emailed to them. The patient can be encouraged to make a follow-up appointment for further discussion. The clinician may choose to renew only a small amount of BSH, in order to encourage the patients' timely follow up.

2. On receiving a request for BSH renewal

Send a BSH brochure ([Resource 1](#)) to patients by mail or by email link. Renew a small amount of BSH only, and call the patient in to discuss whether ongoing use is safe and appropriate.

For an EMR practice, identify the patients in your database \geq age 65 with current prescription for BSH in chart. (Sample EMR searches in Practice Solutions and Accuro are provided in [Resources 2 and 3](#)). With this list, decide how to "capture" the patients. Options include:

3. Flag charts of patients booked for upcoming visits

EMR messaging can alert clinicians of adults taking BSH who have an upcoming preventive health exam.

Steps to implementation:

1. Create EMR search to identify patients on BSH with upcoming visit

Consider sending patient empowerment pamphlet ([Resource 1](#)) to patient by mail or by email link before appointment, letting them know this topic will be discussed

2. Send standardized EMR message to clinicians to prompt discussion with patient about BSH.
3. Provide mechanism for feedback to implementation team regarding outcome of efforts. This could be a searchable form in the EMR, or a message so that the implementation team can tabulate results.

4. EMR reminder

An EMR reminder stating “Consider de-prescribing sedative-hypnotic” can be placed into the reminder field for patients on the list.

Steps to implementation:

1. Design a reminder. The reminder should have a built-in mechanism that automatically turns it off once any of the following occurs:
 - b. Printing of patient empowerment pamphlet that is given to the patient; this is acknowledged in the chart; or
 - c. Loading of an EMR template with searchable fields that track which patients are / are not eligible for BSH de-prescribing.
2. Test EMR reminder on test patients for workability, then apply to charts
3. In the first two weeks, seek feedback from clinicians about what works and what does not work; adjust if needed.

5. Outreach

Send a BSH brochure ([Resource 1](#)) to patients by mail or by email link. Invite the patients to make an appointment with a member of your primary care team to discuss how the information is relevant to their own health.

Engaging patients in shared decision-making

Patients may have been taking BSH medications for months or years, and there might be some initial reluctance to change. Some points to cover in introducing this discussion include:

- There are many scientific studies showing that these medications are clearly harmful in older people
- As their health care provider, you want to protect them from harms and ensure that every treatment you provide offers more benefit than harm
- As their health care provider, you want to make sure you are practicing according to the most up-to-date knowledge

In discussing BSH drugs, it is common for patients to express that they have not experienced any of the possible harms. They sometimes believe that the risks outlined in the patient empowerment pamphlet do not apply to them. Anticipating these beliefs and drawing on the strengths of your existing relationship with the patient can help guide these conversations in a way that is mindful of the science and respectful of the patient. Tapering BSH drugs is a preventive measure that avoids future harm. Your patients will want to hear that you are worried about them and are keen to promote healthy aging. This is why you are taking the time to discuss harm reduction strategies. Some patients insist that they only use BSH episodically. Let them know that episodic use of sedative-hypnotics is associated with the highest risk of hip fractures, even compared to regular use (ref: Zint et al.).⁴

De-prescribing BSH is iterative for most patients. The first conversation usually leads to many more conversations. Like any health behaviour change, tapering or stopping BSH relates to readiness.

For patients who are ready to deprescribe, recommend the use of a sleep diary ([see Resource 1](#)), in order to monitor sleep efficiency (explain). It would be very helpful to explain that stimulus control and sleep restriction are used to increase sleep efficiency.

De-prescribing BSH with patients who are ready

When patients are ready to taper or stop, several things can be helpful:

Using the tapering protocol on page 11 of the patient empowerment brochure ([Resource 1](#))

- Making a follow-up appointment and encourage them to make note of their questions or concerns
- Connecting to health care, community, or on-line resources that encourage alternative ways to optimize sleep
- Providing a mechanism for them to ask questions or get help if they are having trouble,

for example reaching a knowledgeable allied health provider on your team or their community pharmacist

- This written information can be helpful to patients with higher education levels: <http://www.open-pharmacy-research.ca/wordpress/wp-content/uploads/benzodiazepine-deprescribing-information-pamphlet.pdf>
- Forewarning the patient about withdrawal symptoms, and brainstorming coping strategies.

1. De-prescribing algorithm

This resource for clinicians can be helpful for troubleshooting.

<http://www.open-pharmacy-research.ca/wordpress/wp-content/uploads/deprescribing-algorithm-benzodiazepines.pdf>

This more detailed resource may also be helpful.

www.benzo.org.uk/manual/index.htm

Alternatives to BSH

Most patients are taking BSH to help them with either their sleep or anxiety. When patients are tapering off their BSH medications, it is important to offer alternatives that will help them improve their sleep or reduce their anxiety. Below are strategies that can be suggested:

1. Sleep alternatives

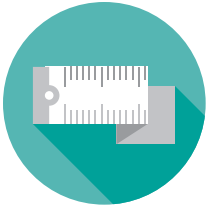
There are a variety of lifestyle changes that can be suggested to patients to help improve the quality of their sleep. The list below shows some of the most common ones ([Resource 1](#)):

- Do not read or watch TV in bed. Do so in a chair or on a couch
- Try to get up in the morning and go to bed at night at the same time every day
- Before going to bed, practice deep breathing or relaxation exercises
- Get exercise during the day, but not during the last three hours before going to bed
- Avoid consuming nicotine, caffeine and alcohol as they are stimulants
- Keep a sleep diary to get a better understanding of disruptive sleep patterns (a sleep diary template can be found at: http://www.criugm.qc.ca/fichier/pdf/Sleep_brochure.pdf)
- Check out the website Sleepwell Nova Scotia (www.sleepwellns.ca), which offers online cognitive behavioural therapies to improve sleep

2. Anxiety alternatives

There are a variety of safer alternatives to BSH that can be suggested to patients with their anxiety and stress. The list below shows some of the most common ones ([Resource 1](#)):

- Talk to a therapist
- Join support groups to relieve stress and make you feel you are not alone
- Try relaxation techniques like stretching, yoga, massage, meditation or tai chi
- Consider prescriptions for anti-anxiety medications that have less serious side effects



Measuring your performance

The following are common measures used to evaluate de-prescribing interventions.

1. Outcome measures: the main improvement you are trying to achieve, for example:

of patients in EMR \geq age 65 with current prescription for BSH in chart. This is the baseline rate. It can be repeated monthly and plotted on a graph to observe the effect over time and response to interventions. Sample EMR searches in Practice Solutions and Accuro are provided ([Resources 2 and 3](#)).

- # of those patients who successfully stopped BSH over a duration
- # of those patients who lowered their dose over a duration
- # of those patients who were not actively taking the BSH, and for whom the medication list simply needed “cleaning up”.

2. Process measures: the measures to ensure that each aspect of the intervention is being carried out as intended.

- Percentage of clinicians who received training around the intervention
- # of patients involved in the effort (if number of patients identified at baseline is large, you might consider tackling a subset)
- Percentage of patients involved who engaged in discussion of risks of ongoing BSH use
- Percentage of patients involved who were given the empowerment pamphlet

3. Balance measures: new consequences of the intervention that need to be tracked in order to plan or revise your QI efforts.

Physical dependence on BSH means that patients need support to taper and stop these medications. This can mean multiple points of contact with health care providers and additional time at visits. Balance measures could include:

- # of “iterations” of patient contact made (office visits, phone calls, emails, visits to team pharmacist, nurse, or social worker, etc)
- Additional time in minutes required to discuss tapering or de-prescribing
- Alternative medications being prescribed in place of BSH. The extent of risks of other classes of medications (eg. tricyclic antidepressants) used in the elderly to promote sleep are unknown. They may not be safer than BSH drugs. This is important to track.

4. Target measure: Aim for 5% or less prevalence of sedative-hypnotic use in your practice at any given time.



Sustaining early successes

Once the intervention has been implemented and refined resulting in some reduction in inappropriate long-term BSH use, there are several ways to help sustain this performance:

1. Indication for appropriate BSH use should become standard in the clinic. This information should be provided to all new clinicians and trainees joining the clinic. Posters listing these indications can be posted in lunchrooms or clinician office space.
2. Performance measures can be reviewed regularly to ensure that performance levels do not revert back to baseline over time.



References

1. Tannenbaum C, Martin P, Tamblyn R, Benedetti A, Ahmed S. Reduction of Inappropriate Benzodiazepine Prescriptions Among Older Adults Through Direct Patient Education. The EMPOWER Cluster Randomized Trial. *JAMA Intern Med.* 2014;174(6):890-898.
2. Canadian Institute for Health Information. Unnecessary Care in Canada. Ottawa, ON: CIHI; 2017; p30.
3. Glass J, Lanctôt KL, Herrmann N, Sproule BA, Busto UE. Sedative hypnotics in older people with insomnia: meta-analysis of risks and benefits. *BMJ.* 2005; <https://doi.org/10.1136/bmj.38623.768588.47>
4. Zint K, Haefeli WE, Glynn RJ, Mogun H, Avorn J, Stürmer T. Impact of drug interactions, dosage, and duration of therapy on the risk of hip fracture associated with benzodiazepine use in older adults. *Pharmacoepidemiology and Drug Safety.* 2010;19(12):1248–55.



Additional Resources

BSH resources

1. <http://www.criugm.qc.ca/fichier/pdf/BENZOeng.pdf>
Searches that can be imported to Practice Solutions EMR can be downloaded through the Accuro EMR cloud:
2. NYFHT_Sedative_Hypnotics_Deno
3. NYFHT_Sedative_Hypnotics_Num

Or accessed by emailing info@choosignwiselycanada.org. These searches were authored by North York Family Health Team, Toronto, 2017.

QI resources

1. HQO: <http://qualitycompass.hqontario.ca/portal/getting-started#.VqJNBsd6wUg>
2. IHI: <http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>

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