**SUPPLEMENTARY FILE**

**PRESCRIBER ACCEPTABILITY OF THE SLEEPWELL INTERVENTION SURVEY**

The prescriber survey for assessing the Sleepwell direct-to-patient intervention used in the YAWNS NB study

|  |  |  |
| --- | --- | --- |
| Survey Section | Subsections | Survey items\* |
| 1. Demographics |  | 1. Age 2. Gender 3. Years of practice 4. Type of prescriber 5. Medical/Nurse Practitioner specialty 6. Practice type 7. Practice location |
| 1. BZRAs and your practice | Experiences with prescribing and deprescribing BZRAs for older adults\*  \* Older patients refers to your patients who are 65 years and older who are relatively independent and NOT living in a long-term care facility. | 1. BZRAs significantly improve my older patients' sleep quality. (Siriwardena, Qurechi, Gibson, Collier, & Latham, 2006) 2. The benefits of long-term BZRA for sleep usually outweigh their risks in my older patients. (Cook, Marshall, Masci, & Coyne, 2007; Sirdifield et al., 2013) 3. I regularly remind my older patients taking BZRAs long-term about their risks. (Neves, Oliveira, Fernandes, Santos, & Maria, 2019) 4. My older patients quickly develop a dependence on BZRAs (Sorscher, Siddiqui, Olsen, & Johnson, 2016) 5. I have had mostly positive experiences in working with older adults when deprescribing long-term use of BZRAs. 6. Deprescribing long-term BZRAs in older adults poses a greater risk to these patients than continuing them. (Cook et al., 2007; Sirdifield et al., 2013) 7. I have difficulty motivating my older patients to stop BZRA use. (Anthierens et al., 2010; Evrard, Pétein, Beuscart, & Spinewine, 2022; Neves et al., 2019) 8. Older adults are resistant to reducing or stopping their BZRAs. (Dyas et al., 2010; Evrard et al., 2022) 9. As much as possible, I avoid BZRAs in my older patients due to potential for serious harms. 10. I feel pressured by my older patients to continue their BZRA prescriptions. (Dyas et al., 2010; Neves et al., 2019) 11. I have first-hand experience of family members pushing me to continue their loved one's BZRA prescription. 12. I am confident that I don't over-prescribe BZRAs in my older patients with insomnia. 13. In my experience, collaboration with pharmacists improves the chance of BZRA deprescribing success in older patients. 14. The longer an older adult has taken a BZRA the harder it is for them to stop it. (Evrard et al., 2022) 15. The personality traits of an older patient strongly influence their ability to stop BZRAs. 16. I mostly avoid talking to my older patients about stopping their BZRAs. (Evrard et al., 2022) 17. Many of my older patients had their BZRA started by another prescriber. (Evrard et al., 2022) 18. The COVID-19 pandemic has made it more difficult to help older patients reduce or stop their BZRAs. 19. Older adults who stop BZRAs usually ask for another medication to help with sleep. (Sirdifield et al., 2013) |
| Experiences with behavioral sleep therapy approaches to managing insomnia \*  \* The term "behavioural sleep therapy" is used here to indicate a range of behavioural (non-pharmacologic) and cognitive therapies or techniques used to manage insomnia (e.g., stimulus control, time-in-bed restriction therapy, relaxation therapy, cognitive therapy, and behavioural components of sleep hygiene). | 1. Older patients prefer BZRAs over behavioural sleep therapy options for insomnia. (Dyas et al., 2010) 2. Behavioural sleep therapy treatments are too time-consuming and difficult for my older patients. (Anthierens et al., 2010) 3. I don't know how to get an older patient started with behavioural sleep therapy. (Neves et al., 2019) 4. Behavioural sleep therapy is a better option than BZRAs for my older patients. (Neves et al., 2019) 5. Younger patients are better candidates than older ones for behavioural sleep therapy. (Cook et al., 2007) 6. Supporting my older patients who use behavioural sleep therapy is a good use of my time. (Anthierens et al., 2010) 7. Current billing options are a barrier to me offering behavioural sleep therapy for insomnia. (Cook et al., 2007; Evrard et al., 2022) |
| General BZRA questions | 1. Chronic use of BZRAs by older patients in my region is a public health concern. (Neves et al., 2019) 2. Long-term use of BZRAs for insomnia in older patients is unnecessary in most cases. 3. Prescribers in my region are judicious in their use of BZRAs for insomnia in older patients. |
| BZRA use in New Brunswick | 1. In your opinion, what is the rate of long-term BZRA use by older adults in New Brunswick compared to the rest of Canada? 2. Estimate your rate of prescribing BZRAs to older patients with sleep problems compared to your NB colleagues with similar practices? |
| 1. Sleep Therapy Recommend-ations | Frequency non-pharmacologic insomnia therapies recommended | 1. Sleep hygiene 2. Time-in-bed restriction therapy (a.k.a. sleep restriction therapy) 3. Cognitive therapy 4. Relaxation techniques 5. Daily recording of sleep using a sleep diary |
| 1. Sleepwell awareness | Assess pre-survey familiarity with Sleepwell. | 1. Are you aware that one of your patients received a Sleepwell package as a participant in the YAWNS NB study? 2. Did the Sleepwell materials encourage you and your patient to discuss their BZRA use? 3. Did you directly review the Sleepwell print materials received by your patient? 4. Were you familiar with Sleepwell unrelated to this research study? |
| 1. Sleepwell intervention | Acceptability evaluation of Sleepwell intervention used in the YAWNS NB study \*  \* When rating your level of agreement with each statement, keep in mind the specific patient group who received the Sleepwell package as part of the YAWNS NB study: people aged 65 years and older, living independently, and taking BZRAs (e.g., zopiclone, lorazepam) long-term (>3 months). Rate your level of agreement SPECIFICALLY related to this group of patients. | 1. I support my older patients receiving the Sleepwell materials. 2. Sending the Sleepwell materials to my older patients without my approval is inappropriate. 3. It is best if the BZRA prescriber decides who gets the Sleepwell materials. 4. I'd like to use the Sleepwell materials with my older patients. 5. The Sleepwell materials have useful information for my older patients. 6. If given the option, my older patients will choose sleeping pills over discussing the Sleepwell materials with me. 7. I like how the Dangers of Sleeping Pills are represented in the Sleepwell materials (Booklet 1, p. 4-7). 8. The Sleepwell materials facilitate informed decision making. 9. The Sleepwell materials are unnecessary for my practice as I already have what I need. 10. Older adults should have access to the information in the Sleepwell materials. 11. The amount of effort required by me to help an older patient stop BZRAs will be reduced by using the Sleepwell materials. 12. I don't want to be responsible for storing and giving out Sleepwell materials to my older patients. 13. To ensure equity in resource access, I support a regular mailout of Sleepwell materials to older patients taking BZRAs long-term. 14. In the hands of older patients taking BZRAs long-term, the Sleepwell materials will lead to more harm than benefit. 15. A health promotion campaign that mails Sleepwell materials to older patients will excessively strain my practice. 16. Sleepwell materials would benefit my patients. 17. The Sleepwell materials are written at an appropriate level for my older patients. 18. The Sleepwell materials effectively encourage older adults to plan BZRA dose reduction with their prescriber. 19. With the Sleepwell materials, many of my older patients will improve their sleep while relying less on BZRAs. 20. The Sleepwell materials complement my approach to managing insomnia in older patients. 21. The Dangers of Sleeping pills section (Booklet 1, p. 4-7) will motivate older patients to reduce or stop BZRA use. 22. The Sleepwell materials are a credible way to promote behavioural sleep therapy treatments for insomnia. 23. The Sleepwell materials will distract from more important health issues to be discussed with my older patients. 24. The Sleepwell materials will make collaborating with pharmacists easier when stopping BZRAs. 25. A mailed health promotion campaign of Sleepwell materials for older patients taking BZRAs will lead to their reduced use. 26. My older patients will be more interested in stopping their BZRA when given the Sleepwell materials. 27. I am capable of using the Sleepwell materials with my older patients. 28. My older patients receiving the Sleepwell materials will feel comfortable bringing them to my attention. 29. The Sleepwell materials will make older patients more self-reliant at reducing BZRA. 30. The Sleepwell materials will help me stop BZRA use in older patients. 31. My older patients will learn new ways to improve their sleep using the Sleepwell materials. 32. Many of my older patients will be able to stop taking BZRAs if I encourage them to use the Sleepwell materials. 33. More training in behavioural sleep therapy techniques will give me the confidence I need to use the Sleepwell materials. 34. Use of the Sleepwell materials by my older patients will help me promote behavioural sleep therapy approaches across my practice. |

\*The survey development process for items in section B included a review of existing research, including qualitative and quantitative investigations, on clinician perspectives, attitudes, and experiences with BZRAs. We identify sources that directly influenced item development.

**Theoretical Framework of Acceptability (TFA) constructs and explanations (Sekhon, Cartwright, & Francis, 2017)**

|  |  |
| --- | --- |
| **TFA Component Construct** | **Explanation** |
| 1. Affective Attitude | How an individual feels about the intervention. |
| 2. Burden | The perceived amount of effort that is required to participate in the intervention. |
| 3. Ethicality | The extent to which the intervention has good fit with an individual’s value system. |
| 4. Intervention Coherence | The extent to which the participant understands the intervention and how it works. |
| 5. Opportunity Costs | The extent to which benefits, profits or values must be given up to engage in the intervention. |
| 6. Perceived Effectiveness | The extent to which the intervention is perceived as likely to achieve its purpose. |
| 7. Self-efficacy | The participant’s confidence that they can perform the behavior(s) required to participate in the intervention. |

**References**

Anthierens, S., Pasteels, I., Habraken, H., Steinberg, P., Declercq, T., & Christiaens, T. (2010). Barriers to nonpharmacologic treatments for stress, anxiety, and insomnia: Family physicians’ attitudes toward benzodiazepine prescribing. *Canadian Family Physician Medecin De Famille Canadien*, *56*(11), e398-406.

Cook, J. M., Marshall, R., Masci, C., & Coyne, J. C. (2007). Physicians’ perspectives on prescribing benzodiazepines for older adults: A qualitative study. *Journal of General Internal Medicine*, *22*(3), 303–307. https://doi.org/10.1007/s11606-006-0021-3

Dyas, J. V., Apekey, T. A., Tilling, M., Ørner, R., Middleton, H., & Siriwardena, A. N. (2010). Patients’ and clinicians’ experiences of consultations in primary care for sleep problems and insomnia: A focus group study. *The British Journal of General Practice: The Journal of the Royal College of General Practitioners*, *60*(574), e180-200. https://doi.org/10.3399/bjgp10X484183

Evrard, P., Pétein, C., Beuscart, J.-B., & Spinewine, A. (2022). Barriers and enablers for deprescribing benzodiazepine receptor agonists in older adults: A systematic review of qualitative and quantitative studies using the theoretical domains framework. *Implementation Science*, *17*(1), 41. https://doi.org/10.1186/s13012-022-01206-7

Neves, I. T., Oliveira, J. S. S., Fernandes, M. C. C., Santos, O. R., & Maria, V. A. J. (2019). Physicians’ beliefs and attitudes about Benzodiazepines: A cross-sectional study. *BMC Family Practice*, *20*(1), 71. https://doi.org/10.1186/s12875-019-0965-0

Sekhon, M., Cartwright, M., & Francis, J. J. (2017). Acceptability of healthcare interventions: An overview of reviews and development of a theoretical framework. *BMC Health Services Research*, *17*(1), 88. https://doi.org/10.1186/s12913-017-2031-8

Sirdifield, C., Anthierens, S., Creupelandt, H., Chipchase, S. Y., Christiaens, T., & Siriwardena, A. N. (2013). General practitioners’ experiences and perceptions of benzodiazepine prescribing: Systematic review and meta-synthesis. *BMC Family Practice*, *14*, 191. https://doi.org/10.1186/1471-2296-14-191

Siriwardena, A. N., Qurechi, Z., Gibson, S., Collier, S., & Latham, M. (2006). GPs’ attitudes to benzodiazepine and ‘Z-drug’ prescribing: A barrier to implementation of evidence and guidance on hypnotics. *British Journal of General Practice*, *56*, 964–967. Retrieved from https://bjgp.org/content/bjgp/56/533/964.full.pdf

Sorscher, A. J., Siddiqui, A. A., Olsen, A., & Johnson, D. J. (2016). Pharmacotherapy for Chronic Insomnia: A Brief Survey of PCP Attitudes and Preferences. *Journal of Sleep Disorders: Treatment & Care*, *5*(1). Retrieved from https://digitalcommons.dartmouth.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1055&context=facoa