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Care Coordination Needs for Deprescribing Benzodiazepines and Benzodiazepine Receptor Agonists

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Abstract

Deprescribing of medications such as benzodiazepines and benzodiazepine receptor agonists (z-drugs) can be a complex process that varies across practices, specialties, and health care systems. Care coordination among healthcare providers, patients, families, and other healthcare system components is critical to achieving high levels of deprescribing and person-centered care. We present a framework for promoting care coordination in the context of benzodiazepine/z-drug deprescribing. Future efforts are needed to study the impact of better care coordination on benzodiazepines/z-drug discontinuation and other outcomes that are important to stakeholders.

Keywords

deprescribing; care coordination; sleeping pills

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Background

Benzodiazepines and benzodiazepine receptor agonists (z-drugs) are often prescribed to treat insomnia. Up to 10% of older adults fill a benzodiazepine prescription, and of these nearly one-third are long-term users.¹ Long-term use of benzodiazepines/z-drugs can lead to adverse outcomes in older adults such as an increased risk of hip fractures² and cognitive impairment³, leading the American Geriatric Society to recommend in their Beers Criteria the avoidance of benzodiazepines/z-drugs in older adults.⁴ Interest in deprescribing (i.e., the planned and supervised process of dose reduction or discontinuing medications that may be causing more harm than benefit)^{5, 6} benzodiazepine/z-drugs is growing. A number of deprescribing programs such as “Eliminating Medications Through Patient Ownership of End Results” (EMPOWER), which used direct-to-patient mailing about sleeping pills, have reduced unnecessary use of these medications.⁷ In a pilot study, Shed-MEDS, a hospital-based, patient-centered deprescribing program, reduced the total medication burden among older adult participants.⁸

Deprescribing can be a complex process that can vary across practices, specialties, and health care systems, influenced by numerous factors including provider and patient preferences and expectations, a prescribing culture, and health care system policies.^{9, 10, 11} A framework for deprescribing within a single clinical team (e.g., cardiovascular) has been proposed and involves reviewing, assessing risks of medications that may be candidates for deprescribing, discontinuing a medication, and monitoring.¹² The Shed-MEDS framework incorporates patient preferences and clinical context.¹³ Deprescribing medications such as benzodiazepines/z-drugs may be most successful when multiple stakeholders are engaged in the deprescribing process, and failure to implement a comprehensive deprescribing protocol can lead to a disorganized process that fails to engage fully with patients and providers within the context of the health care system. On the other hand, patient and provider education, a patient-centered culture, and multidisciplinary collaboration have been shown to promote successful deprescribing.^{9, 14} There is some evidence that tools (e.g., lists of medications to consider deprescribing) help providers with deprescribing-related decisions, although implementation and effectiveness of these tools have not been well studied,¹⁵ particularly with care coordination, which is an important aspect of deprescribing. In this Commentary article, we present a framework for promoting care coordination in the context of benzodiazepine/z-drug deprescribing.

Care Coordination

Care coordination is the deliberate organization of health care services between providers, patients, and caregivers, and is intended to facilitate patient care across points of transition.¹⁶ The Agency for Healthcare Research and Quality (AHRQ) identifies two categories of transitions: between entities of a health care system, and over time.¹⁶ Patients are vulnerable during transitions of care, and strategic care coordination can increase system efficiencies, promote quality and safety in care, and improve the patient experience. Building strong care coordination networks takes effort, but once built these networks can support patients across multiple platforms of care and improve patient care, satisfaction, and other outcomes.^{17, 18, 19}

Care Coordination Model for Benzodiazepine/Z-Drug Deprescribing

Identifying the underlying reason for benzodiazepine/z-drug prescription and the relevant stakeholders are critical first steps in the deprescribing process. In recent years, multiple frameworks have emerged to support care coordination across primary and specialty care, but they have not been applied to the systematic process of deprescribing.²⁰ The AHRQ Care Coordination Ring¹⁶ serves as a useful framework for care coordination in patients undergoing benzodiazepine/z-drug deprescribing by identifying potential stakeholders who can contribute to a successful deprescribing program. The proposed modified AHRQ Care Coordination Ring¹⁶ (Figure 1) illustrates the central goal of benzodiazepine/z-drug deprescribing (center of triangle) and the key stakeholder perspectives that contribute to achieving that goal (sides of triangle): (a) patient/family members, (b) health care professionals, and (c) the larger health care system. All three perspectives need to be considered in any concerted approach to deprescribing. Circles on the outer rim of the figure represent one combination of individuals, settings, and information relevant to achieving the central goal of benzodiazepine/z-drug deprescribing. The combination depends upon context and setting. In the proposed model, the patient/family members are comprised of the patient, family members and/or caregivers, the home environment and the community in which the patient resides. This framework posits that the home environment and the community setting should be carefully considered when deprescribing benzodiazepines/z-drugs that are used chronically for insomnia. A behavioral health provider, for example, can advise the patient on methods to make the home environment more conducive to sleep. Resources in the community environment can provide opportunities for adequate exercise, which can support healthy sleep patterns.

A multidisciplinary health care team optimizes care coordination across the deprescribing process. Some team members to consider include the prescribing provider, the pharmacist, a behavioral health interventionist, and other health professionals. Establishing open communication throughout this network will result in a more comprehensive, person-centered effort. Patients may ask any member of the health care team about benzodiazepine/z-drug deprescribing, so having a best practice protocol for all team members to follow will promote more standardized care. The prescribing provider can work with the pharmacist on a taper schedule, while a behavioral health interventionist (psychologist, trained nurse or social worker) can provide evidence-based cognitive behavioral therapy for insomnia (CBTI) concurrent to the taper. If necessary, an occupational therapist could evaluate the home environment and a physical therapist could provide an exercise program. This integrated approach contrasts with current deprescribing practice, which often occurs through the isolated efforts of a single health care professional.

Health care systems increasingly support efforts to coordinate care, which can result in a more efficient delivery of patient care. To create an integrative approach to deprescribing, a health care system must provide access to medical records across providers to ensure that all team members are aware of the deprescribing plan, resources to support provider efforts (e.g., appropriate tapering schedules), and a payer system that values benzodiazepine/z-drug deprescribing. Many health care institutions now recommend

deprescribing benzodiazepines/z-drugs in older adults as a preventive measure, but few have created multidisciplinary teams to guide best practice.

The catalyst for benzodiazepine/z-drug deprescribing could be any of the three broad groups represented as the sides of the triangle—a patient could approach a healthcare provider about falls at home, a health care professional could notice increased patient confusion at an annual visit, or a best practice deprescribing program could be implemented at a health care system level.

Case Example

Mr. G is a 72-year-old man with diabetes mellitus, chronic obstructive pulmonary disease, and mild cognitive impairment. He recently fell at home and was hospitalized overnight. He lives with his 70-year-old wife, who helps him organize his appointments and manages his medications. He has taken temazepam for five years for insomnia.

The first scenario illustrates the potential negative impact on a patient's health when poor care coordination is further exacerbated by health care system fragmentation, high clinical complexity, and low patient capacity for managing his own care. The health care system rolled-out a system-wide alert as part of efforts to deprescribe benzodiazepines, but did not provide additional information to providers. The provider adhered and discontinued the medication, but no effort was made to discuss options with the patient, including tapering, additional support, and informational resources about insomnia. The patient became confused, frustrated, and concerned. A "cold-turkey" approach led to another clinical issue (rebound insomnia), which could result in additional office visit(s) and use of other medical services. The lack of communication between medical personnel was confusing to the patient and his caregiver.

The second scenario illustrates how care coordination for deprescribing benzodiazepines can contribute to improving a patient's health outcome and patient experience, even with health care system fragmentation, high clinical complexity, and low patient capacity to manage his own care. The pharmacist was part of the team managing Mr. G's discharge care plan. The pharmacist utilized the EHR platform to contact the patient and documented notes for other team members. The warm hand-off between the pharmacist, to the nurse assistant, to the nurse, and finally to the primary care provider is an example of person-centered care for discontinuation of benzodiazepines. The team utilized EHR to communicate with each other and with the patient; they included the patient's caregiver in the discussions; and implemented evidence-based practices such as screening for insomnia and introducing CBTI to be used in conjunction with benzodiazepines/z-drugs tapering. The patient's quality of life and health care experience remained positive. The deprescribing support team and primary care team maintained contact with the patient through mailings, electronic secure messages, and phone calls. Team members ensured the patient would have a support structure months after his initial decision to discontinue use of benzodiazepines/z-drugs.

Discussion

Successful deprescribing of medications such as benzodiazepines/z-drugs can be supported by structured care coordination among providers, patients/families, and the healthcare system. Care coordination promotes identification of different stakeholder needs around benzodiazepine/z-drug discontinuation and is critical to delivering person-centered care. Deprescribing benzodiazepines/z-drugs requires more than a discontinuation of a prescription, and should include multidisciplinary partners to support health behavior change. This can be bolstered by a structured care coordination approach. A provider must have a knowledge of comprehensive services available to support the patient during the medication taper, resources to promote ongoing communication and patient follow up, and education to support patient self-efficacy.

In a traditional siloed practice culture, individual providers are responsible for deprescribing. A care coordination-based approach would leverage lessons learned from other clinical settings (oncology navigators, patient aligned care teams) to create networks of professionals who can work together to support the patient in successfully transitioning off of a medication. Care coordination fosters a new culture of collaboration between the patient, health care professionals, and the health care system, such that all parties involved are supported through better communication and shared resources. Standardization of optimization measurements to establish the costs and benefits of care coordination in the context of deprescribing have yet to be established. Future efforts are needed to study the impact of care coordination in the context of benzodiazepine/z-drug deprescribing to measure the impact of this of model for care coordination on successful medication discontinuation as well as outcomes that are important to all of the stakeholders, including potential for increased cost, time, and staffing associated with care coordination.

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Box 1.

Low Care Coordination

At morning hospital rounds, Mr. G is told that he will be discharged home that day. While preparing the discharge orders, his physician sees an alert about the temazepam prescription. The physician is aware of ongoing initiatives to limit benzodiazepines/z-drug use in older adults, so the physician removes the medication from Mr. G's final medication list. Mr. and Mrs. G are provided standard discharge instructions, informed that additional information is available online, and instructed that he should see his primary care provider in 10 days.

Due to multiple delays, Mr. G is finally discharged at 5pm, with his bottles of medications delivered from the pharmacy. Back at home, Mrs. G begins filling the pillbox and notices one less bottle than usual. She realizes temazepam has been removed from her husband's list of medications. She does not recall any explanation about the missing medication. The next morning, she calls the nursing station at the hospital and speaks with her husband's nurse. The nurse was not aware of the change but notes a new program has been instituted across the health system to reduce use of benzodiazepines/z-drugs. The nurse advises a call to Mr. G's primary care provider. At the follow-up appointment, Mr. G says that he has not been sleeping well without the temazepam. His primary care provider explains that the system now discourages her from prescribing temazepam and that poor sleep is just a symptom of getting old. She advises Mr. G to cut back on his coffee and to avoid watching television when he is in bed. Mr. G leaves the visit feeling frustrated but also believes there is no point in making an issue out of it. His sleep deteriorates to the point where he is unable to participate in the daily checkers game he has played with his neighbors for the past decade. He begins taking a daily afternoon nap in front of the television instead, which worsens his insomnia and contributes to depressed mood.

Box 2.**High Care Coordination**

While conducting medication reconciliation at discharge, the pharmacist notes that Mr. G has been taking temazepam for five years for insomnia. The pharmacist contacts Mr. G's primary care provider through the electronic health record (EHR) and flags the medication as a possible contributor to his fall. The medical assistant at the primary care provider's office telephones Mr. G and speaks with his wife to arrange a follow-up appointment. At the follow-up appointment, a nurse sits with Mr. and Mrs. G to screen for insomnia, evaluate his sleep habits, and discuss his continued use of temazepam. During this discussion, Mr. and Mrs. G, who previously were unaware that benzodiazepines can contribute to falls in older adults, learn about benzodiazepine risks. They inquire about alternative insomnia treatments during their visit with his primary care provider. Mr. G's doctor discusses tapering the temazepam and starting cognitive behavioral therapy for insomnia (CBTI). She works with the pharmacist to personalize the taper schedule for Mr. G and provides a referral to a behavioral therapist who specializes in CBTI. The health care system has recently expanded its CBTI program, and appointments are available for Mr. G to participate in CBTI during the proposed benzodiazepine tapering period. A secure EHR message is sent 48 hours after the provider visit to remind Mr. G to make an appointment with the behavioral therapist. Mr. G meets with the behavioral therapist for eight weeks to work through the CBTI program. A nurse manager calls Mr. G every other week for two months to assess withdrawal symptoms and sleep quality. The health care system's deprescribing support team routinely sends educational information about sleep and healthy diet to all patients flagged for having discontinued use of benzodiazepines (prescribed at bedtime)/z-drugs. Mr. G continues to participate in his daily checkers game with his neighbors and after noticing some improvement in his energy level, begins regularly attending the local high school basketball games as an avid fan. At a cardiology visit nine months later, the cardiologist and Mr. G briefly discuss his improved sleep (without temazepam) and plans to begin a new walking program.

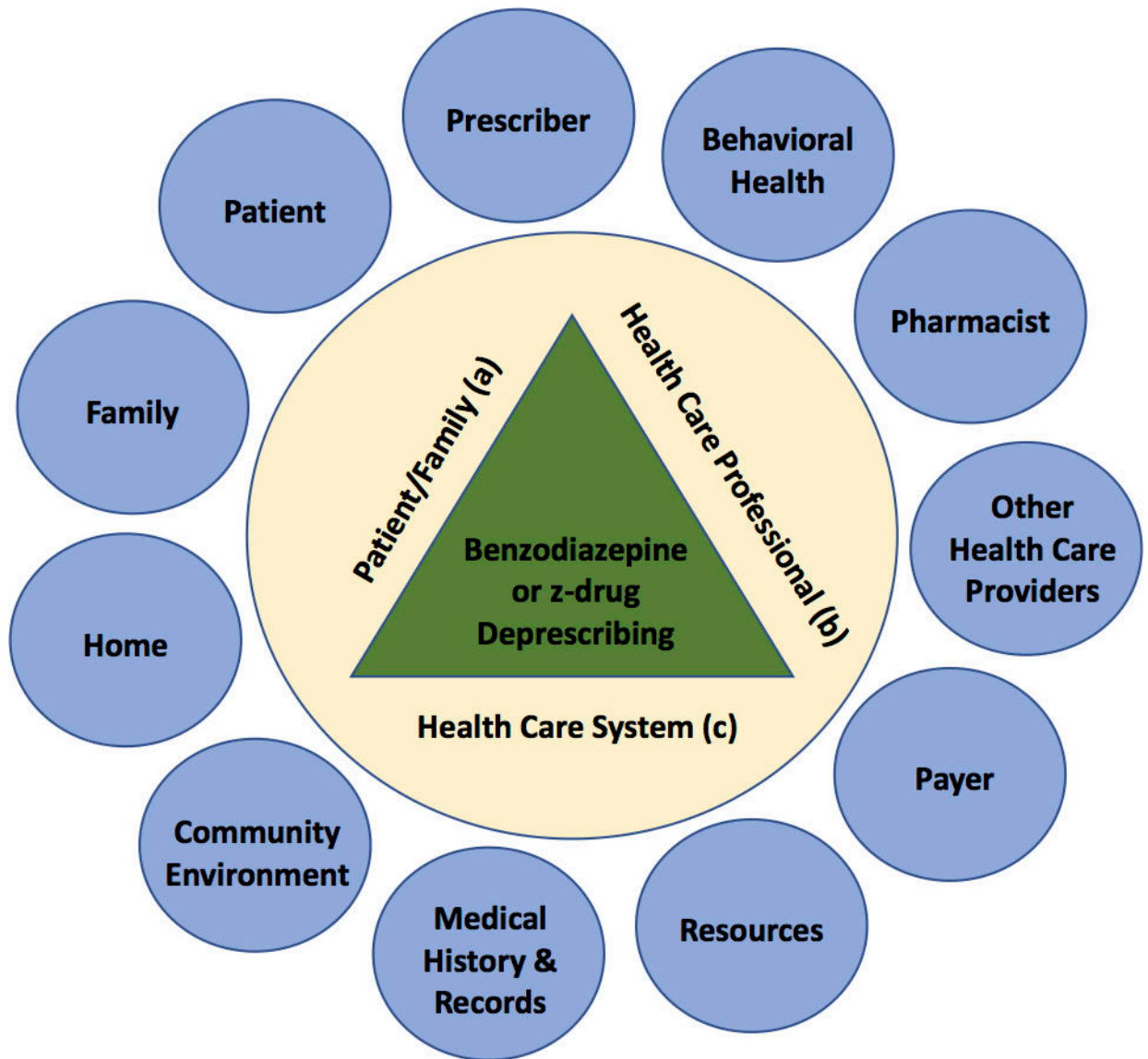


Figure 1.

Modified AHRQ Care Coordination Ring

The central goal of care coordination for benzodiazepines/z-drug deprescribing is shown in the triangle. Successes and failures in care coordination will be perceived (and may be measured) in different ways depending on the perspective: patient/family (a), health care professional (b), or health care system (c). The blue circles represent some of the possible participants, settings, and information important to the care pathway and workflow.

Triangle - central goal for care coordination

Large Circle - three populations involved in care coordination

Circles - participants, settings, and information necessary for care coordination