Deprescribing Benzodiazepines in Hospitalized Seniors Using a Patient-Education Intervention

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Objectives

1. Provide an overview of the problem of benzodiazepine use in older adults.

2. Outline the current guidelines for benzodiazepine use in older adults.

3. Present the methods and results of a QI study, Deprescribing Benzodiazepines.
Faculty/Presenter Disclosure

• **Faculty:** Dr. Jean Triscott; Dr. Frances Carr

• **Relationships with commercial interests:**
  • **Grants/Research Support:** Northern Alberta Academic Family Medicine Fund ($5000)
  • **Speakers Bureau/Honoraria:** N/A
  • **Consulting Fees:** N/A
  • **Other:** Affiliated with the University of Alberta, Glenrose Rehabilitation Hospital
Case

• 75-year-old lady
• Living independently alone
• Impaired memory
• Frequent falls
• Insomnia, osteoarthritis, depression, and others
• Meds: Lorazepam, clonazepam, oxycodone, and others
Misuse of Benzodiazepines (BZD)

• Growing public health problem\textsuperscript{1}
• BZD: 20\%-25\% of inappropriate prescriptions in the elderly\textsuperscript{2-3}
• BZD: prevalence of use range from 5\% to 32\% in community-dwelling older adults\textsuperscript{4-6}
• 50\% of Physicians continue to renew prescriptions, citing patient dependence and benefit\textsuperscript{7}
Risk Factors for BZD Misuse

- Increasing age\textsuperscript{8-10}
- Female\textsuperscript{8-9}
- Poor self-reported health\textsuperscript{11}
- Chronic Pain\textsuperscript{9}
- Physical disability\textsuperscript{9,12}
- Limitations in Instrumental Activities of Daily Living\textsuperscript{12}

- Co-morbidities\textsuperscript{9,13}
- Myocardial infarction\textsuperscript{11}
- Alcohol dependence\textsuperscript{13}
- Cognitive impairment\textsuperscript{9,14}
- Common mental disorders\textsuperscript{11}
- Depression\textsuperscript{13}
- Suicidal ideation\textsuperscript{9,13}
Risks from BZD Use

- Dementia\textsuperscript{15-17}
- Delirium\textsuperscript{18}
- Falls and hip fractures\textsuperscript{16,19}
- Motor vehicle crashes\textsuperscript{20}
Guidelines

American Geriatrics Society (2015) - Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults

Short- and intermediate-acting BZDs (alprazolam, estazolam, lorazepam, oxazepam, temazepam, triazolam)

- Older adults have increased sensitivity to BZDs and decreased metabolism of long acting agents;
- In general, all BZDs increase the risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults.
Guidelines

Canadian Geriatrics Society (2017) - Choosing Wisely Canada
5 Things Physicians and Patients Should Questions – Geriatrics

Don't use BZDs or other sedative-hypnotics in older adults as first choice for insomnia, agitation, or delirium.
Strategies for Deprescribing BZD$^{23}$

- Pharmacological substitution
- Psychological support
- Orally communicated recommendations
- Written medication reviews
- Patient education
- Tapering
Quality Improvement Project: Deprescribing Benzodiazepines at the Glenrose Rehabilitation Hospital

- August 2017 to October 2017
- New patients, ≥ 65 years old
- Taking benzodiazepines at admission
- Sample size: 12 patients

UofA Research Ethics Board (Pro00074428): Outside REB Mandate
AHS Operational Approvals #36863 and #37576
<table>
<thead>
<tr>
<th>AIM</th>
<th>Stop Benzo or Decrease Benzo Dose by 50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEASURE</td>
<td># of Patients Stopped or Decreased Benzo</td>
</tr>
</tbody>
</table>
| INTERVENTION | 1. Medication Review  
2. EMPOWER Brochure  
3. Counselling  
4. Discharge - Continuity of Care |

**PDCA Cycle**
- **P** - Plan
- **D** - Do
- **C** - Check
- **A** - Act

Every 2 Weeks
The EMPOWER Brochure

You May Be at Risk

QUIZ
SEDATIVE-HYPNOTIC DRUGS

1. The medication I am taking is a mild tranquilizer that is safe when taken for long periods of time.
   ○ True ○ False

SO ASK YOURSELF:
YES OR NO?

Have you been taking this sedative-hypnotic drug for a while?
   ○ Yes ○ No

Are you tired and often harbor feelings of guilt?

ALTERNATIVES

If you are taking this sedative-hypnotic drug to help you sleep:

There are lifestyle changes that can help.

ALTERNATIVES

If you are taking this sedative-hypnotic drug to help reduce your anxiety:

There are other solutions to deal with your stress and anxiety:

- Talking to a therapist
- Support groups

TAPERING-OFF PROGRAM

We recommend that you follow this schedule under the supervision of your doctor or your pharmacist.

<table>
<thead>
<tr>
<th>WEEKS</th>
<th>TAPERING SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 and 2</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
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</tbody>
</table>

5 QUESTIONS TO ASK YOUR HEALTH CARE PROVIDER

1. Do I need to continue my medication?
2. How do I reduce my dose?
3. Is there an alternative treatment?
4. What symptoms should I look out for when I stop my medication?
Figure 1: Abbreviated process map for deprescribing.
Results

- 79.3 years of age; 75% Females (n=12)
- Most common BZD: Lorazepam, clonazepam
- Common Indication: Anxiety and Insomnia
- Taken for months to years
- Commonly combined with Zopiclone & psychoactive meds

Table 1. Benzodiazepines and other psychoactive medications at admission.

<table>
<thead>
<tr>
<th>BZD at Admission</th>
<th>Indication</th>
<th>Duration of Use</th>
<th>Other Psychoactive Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam (5)</td>
<td>Anxiety (8)</td>
<td>Years (5)</td>
<td>Zopiclone (7)</td>
</tr>
<tr>
<td>Clonazepam (5)</td>
<td>Insomnia (6)</td>
<td>Months (3)</td>
<td>Duloxetine, paroxetine, mirtazapine, cymbalta, citalopram (7)</td>
</tr>
<tr>
<td>Temazepam (1)</td>
<td>Headache (1)</td>
<td>Weeks (1)</td>
<td>Zopiclone plus: duloxetine, paroxetine, mirtazapine, cymbalta (4)</td>
</tr>
<tr>
<td>Nitrazepam (1)</td>
<td></td>
<td>Uncertain (3)</td>
<td></td>
</tr>
</tbody>
</table>

BZD, Benzodiazepine
Outcome Measure: % Deprescribed

- 6 patients were totally deprescribed
- 5 patients: 50-99% deprescribed
- 1 patient: 0-49% deprescribed

Table 2. Outcome measure: Percent of BZD Dose Deprescribed

<table>
<thead>
<tr>
<th>Benzodiazepine Dose Deprescribed</th>
<th>Patient Discharged (n=5)</th>
<th>Patient Transferred (n=2)</th>
<th>Patient Still Admitted (n=5)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% (Totally) Deprescribed</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>50-99% Deprescribed</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>0-49% Deprescribed</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>12</td>
</tr>
</tbody>
</table>

BZD, Benzodiazepine
Balancing & Process Measures

Reported Complications
• Anxiety (5)
• Withdrawal symptoms (2)
• Sleep changes (1)

Medications Added
• 5 patients required benzodiazepine-substitute medications

Process
• All eligible patients were enrolled
• All patients were given booklets and received counselling
• Average estimated counselling time:
  18 minutes by MDs; 39 minutes by Pharmacists
Patients

- 85-year-old male
- Clonazepam for uncertain indications
- Totally deprescribed
- Complication: Anxiety
- Added: Mirtazapine

- 80-year-old female
- Lorazepam for anxiety
- Failed deprescribing
- Complication: Anxiety
- Added: Mirtazapine, cymbalta
- Transferred to geriatric psychiatry
Case

- Med Review
- EMPOWER brochure
- BZDs tapered
- Cognitive behavior therapy
- Melatonin
- Home Care and Day program
References (1)


References (2)


References (4)


