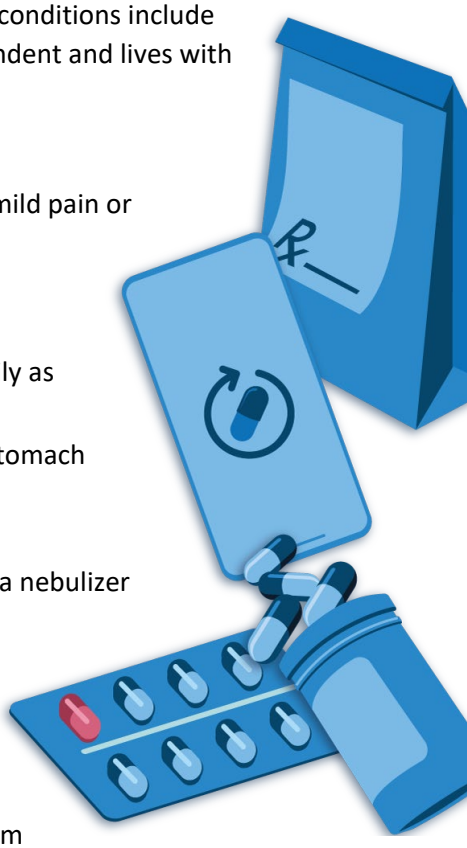
PALLIATIVE PEARLS
BY ENCLARA PHARMACIA

Approach to Polypharmacy: A Refresher
September 2022

This month's Palliative Pearls serves as a refresher, pulling key points from a popular case, Polypharmacy Management.

PATIENT CASE

MB is a 77-year-old admitted to hospice with a primary diagnosis of COPD. Other conditions include CHF, hypothyroidism, hyperlipidemia, insomnia, and cachexia. He is oxygen-dependent and lives with his wife.



MEDICATIONS:

- Acetaminophen 325mg; Take 1 tablet by mouth every 4 hours as needed for mild pain or fever
- Budesonide (Pulmicort Respules®) 1mg; Inhale the contents of 1 vial via jet nebulizer once daily for breathing
- Docusate sodium 50mg-senna 8.6 mg (Senna-S®); Take 2 tablets by mouth daily as needed for bowel movement
- Esomeprazole (Nexium®) 20mg; Take 1 capsule by mouth daily on an empty stomach for acid reflux
- Furosemide (Lasix®) 20mg; Take 1 tablet by mouth daily for fluid control
- Ipratropium-albuterol (Duoneb®); Inhale the contents of 1 vial 4 times daily via nebulizer for breathing
- Levothyroxine (Synthroid®) 25mcg; Take 1 tablet by mouth daily for thyroid
- Lisinopril (Zestril®) 20mg; Take 1 tablet by mouth daily for heart failure
- Megestrol (Megace ES®) 625mg/5mL susp; Take 1 teaspoonful by mouth daily for appetite
- Potassium chloride (K-Dur®) 20mEq; Take 1 tablet by mouth daily for potassium supplementation
- Simvastatin (Zocor®) 10mg; Take 1 tablet by mouth daily in the evening for cholesterol
- Temazepam (Restoril®) 15mg; Take 1 capsule by mouth at bedtime for sleep
- Tiotropium (Spiriva®) HandiHaler®; Inhale 1 capsule via device once daily for breathing
- Hospice Emergency Kit containing morphine, lorazepam, haloperidol, hyoscyamine, prochlorperazine, bisacodyl and acetaminophen

CASE INITIAL ASSESSMENT

MB has 13 medications, 11 are scheduled and 2 are "as needed", not including the hospice emergency kit that contains morphine among other drugs. This large number of medications, especially in the presence of complex comorbid conditions and older age, can exponentially increase the risk of drug-drug interactions, drug-disease interactions, and adverse drug events (ADRs).[1-3] In addition, the burden of taking this volume of therapies can contribute to the patient's discomfort and debility and overwhelm the caregiver.

POLYPHARMACY

Polypharmacy is the use of multiple drugs (generally 5 to 10) concomitantly and/or the administration of more medications than clinically indicated. Polypharmacy is especially prevalent in the elderly with estimates that 36% take 5 or more medications.[3,4] Polypharmacy can increase the risk of ADRs and decrease medication adherence and quality of life. Multiple comorbidities, multiple prescribers, and lack of recognition of ADRs are some of the most common contributors to polypharmacy.

Before reviewing a medication regimen, it's important to establish goals of care with the patient and caregiver. With goals of care set, the next step is identifying which medications are appropriate for discontinuation, further evaluation, or continuation. Discuss and coordinate with the patient/caregivers and other health care providers to develop a care plan to begin adjusting the regimen. Some patients and caregivers may be reluctant to make medication changes and view recommendations to stop medications as a form of abandonment. To gain their trust, help them to recognize the reasons behind the proposed changes and involve them from the start in the discussions and decision-making process.

MEDICATION REVIEW

The below steps and accompanying questions help guide a comprehensive medication review:[1]

Assessment of patient

- Medication reconciliation
    - What is this medication treating?
    - Does the medication support my patient's goals?
- Identify functional status, deficits, and resulting adherence issues
    - Is there consensus for using this medication in its current dosing rate in this patient's age group and disability level?
    - Can the patient swallow their medications or still use their inhalers properly?
    - Are the directions practical?

Assessment of medications

- Assess drug-drug, drug-disease interactions
- Identify non-beneficial therapy and simplify
    - Does the medication's possible risks outweigh its benefit?
    - Does the medication's time until benefit make sense compared with my patient's remaining life expectancy?

  - Is there another drug that may be superior?
  - Is there a less expensive alternative available?
- Identify high-risk therapy and reconsider

MEDICATIONS THAT CAN BE SAFELY DISCONTINUED

Consider discontinuing medications when:

1. Medications are prescribed without an indication
2. There is a duplication of therapy
3. Benefit is diminished or there is lack of evidence in palliative care
4. Goals of care have changed, and interventions used to prevent possible long-term complications are no longer the primary aim of care and/or
5. They are causing intolerable ADRs

Medication class examples:

- Lipid-lowering medications such as statins
- Dementia medications
- Appetite stimulants
- Antimicrobials
- Over the counter products like vitamins, minerals, and herbals

MEDICATIONS THAT NEED EVALUATION

Several medication classes, when indicated, may continue to be useful for managing symptoms in the hospice patient however need to be continually evaluated for safety and appropriateness as terminal conditions progress. These include:

- Antihypertensives such as beta-blockers, ACE inhibitors, calcium antagonists and diuretics (when used for hypertension)
- Anticoagulants and antiplatelet medications (e.g., warfarin, clopidogrel)
- Oral hypoglycemics (e.g., metformin) and insulins
- Hand-held inhaler devices
- Proton pump inhibitors
- Thyroid medications

MEDICATIONS TO CONTINUE

Hospice beneficiaries generally experience common symptoms during the end of life, regardless of their terminal diagnosis. These symptoms include pain, nausea, constipation, and anxiety.[5] Although it is expected that Medicare hospice providers will continue to provide all the medications that are reasonable and necessary for the palliation and management of a beneficiary's terminal illness and related conditions,[6] these four medication classes are covered by hospice and usually continued through end of life:

- Analgesics
- Antiemetics
- Laxatives
- Anti-anxiety medications

Regardless of indication, all medications deemed appropriate to continue must be assessed for prescription of the lowest, most effective dose, requiring dose reductions to prevent ADRs. There also may be instances where an alternative medication or dosage form is most appropriate to palliate a symptom.

CASE RECOMMENDATIONS

Following a comprehensive medication review and assessment of MB, the team made the following recommendations:

Discontinue

- Megestrol (Megace ES®)
    - Appetite improvement was not included in MB's goals of care
- Simvastatin (Zocor®)
    - Lipid-lowering therapy has no short-term benefit
- Tiotropium (Spiriva®) HandiHaler®
    - Duplicate therapy (MD also prescribed ipratropium in Duoneb as a scheduled dose)
    - MB is unable to breath in deeply and hold his breath to administer this medication properly
- Esomeprazole (Nexium®)
    - No clear indication for use

Regularly Evaluate

- Levothyroxine (Synthroid®)
    - MB is on a low dose and may benefit from a trial dose reduction or discontinuation and reassessment of symptoms
- Lisinopril (Zestril®) & Furosemide (Lasix®)
    - Symptom management for heart failure however also antihypertensives; continually evaluate safety of medication based on blood pressure readings
- Potassium chloride (K-Dur®)
    - Supplementation for furosemide therapy and will not need to be continued when and if furosemide therapy is discontinued

Continue

- Acetaminophen 325mg
    - Necessary pain management
- Docusate sodium 50mg-senna 8.6 mg (Senna-S®)
    - Laxative
- Budesonide (Pulmicort Respules®) & Ipratropium-albuterol (Duoneb®)
    - Necessary symptom management and appropriate dosage form (nebulizer) for MB's capabilities
- Temazepam (Restoril®)
    - Necessary symptom management
- Hospice Emergency Kit containing morphine, lorazepam, haloperidol, hyoscyamine, prochlorperazine, bisacodyl and acetaminophen
    - Necessary pain and symptom management

These suggestions were discussed with MB and his family as a means to reduce the medication burden. Effective communication when discussing these medication changes included:

- A shared decision-making model guided by the patient's goals of care
- Weighing of the expected benefits vs. burdens
- Consideration of treatment goals
- Appropriate timing on admission, prior to recertification, during routine visits or conferences, when ordering or changing a medication or when the level or location of care changes
- Consideration of alternative recommendations based on hospice formulary

CITATIONS

1. Hoel RW, Giddings Connolly RM, Takahashi PY. Polypharmacy Management in Older Patients. *Mayo Clin Proc.* 2021;96(1):242-256. Article link
2. U.S. Pharmacist. Adverse Events: Polypharmacy. *US Pharm.* 2017;42(6):13-14. Article link
3. Rochon PA. Drug prescribing for older adults. In: UpToDate, Schmader KE, Givens J, eds. Waltham, MA: UpToDate, Inc.; Updated May 24, 2022.
4. Qato DM, Wilder J, Schumm LP, et al. Changes in Prescription and Over-the-Counter Medication and Dietary Supplement Use Among Older Adults in the United States, 2005 vs 2011. *JAMA Intern Med* 2016; 176:473.
5. Office of the Inspector General, Department of Health and Human Services. Medicare Could Be Paying Twice for Prescription Drugs for Beneficiaries in Hospice. June, 2012. A-06-10-00059.
6. Centers for Medicare & Medicaid Services (CMS). Hospice coverage. Updated March 14, 2022. Site link

REFERENCES

1. Clinical Pharmacology [database online]. Tampa, FL: Elsevier/Gold Standard, Inc.; 2022.
2. Atayee R, McPherson ML, Pirrello R, Prommer E, Roeland E, et al. The polypharmacy police versus the patient advocate: An evidence-based, patient-tailored approach to medication simplification strategies for the palliative care patient. AAHPM 2015.
3. Abernathy AP, Kutner J, Blatchford PJ, et al. Managing comorbidities in oncology: A multisite randomized controlled trial of continuing versus discontinuing statins in the setting of life-limiting illness. ASCO 2014.
4. Garfinkel D, Mangin D. Feasibility study of a systematic approach for discontinuation of multiple medications in older adults. *Arch Intern Med.* 2010;170(18):1648-1654.
5. Holmes HM, Hayley DC, Alexander GC, Sachs GA. Reconsidering medication appropriateness for patients late in life. *Arch Intern Med.* 2006;166:605-609.
6. Linsky A, Simon SR, Bokhour B. Patient perceptions of proactive medication discontinuation. *Patient Educ Couns*. 2014:1-6.
7. Van Nordennen RT, Lavrijsen JC, Vissers KC, et al. *Drugs Aging.* 2014;31(7):501-512