

Hospice Medication Reconciliation Clinical Vignettes

Objective: This tool consists of four common clinical vignettes based off actual medications lists of patients newly referred to hospice. Each vignette has at least three universally recommended modifications with a brief evidence-based response and several more potential recommended modifications at the discretion of the attending physician.

Clinical Vignette 1

Mr. Jacobs is a 72-year-old man with a hx of hypertension, arthritis, and squamous cell lung cancer with bone metastases s/p chemotherapy stopped 1 month prior. He has experienced declining appetite, increased pain, insomnia polyuria, and constipation and is now unable to walk to the bathroom unassisted with PPS 30%. Yesterday, he started morphine for increased pain in his ribs consistent with his known bone metastases and sertraline for depressed mood as he no longer enjoys watching movies or reading books. A recent complete metabolic panel was notable for a calcium of 9.8 mg/dL and an albumin of 1.4 g/dL.

Calcium carbonate 1250mg PO nightly
Cholecalciferol 500 units daily
Dexamethasone 4mg PO daily
Ibuprofen 600mg PO q 6 hours prn pain
Losartan 25mg PO daily
Morphine 5mg PO q4 hour prn
Polyethylene glycol 17gram packet daily
Senna 8.6mg PO daily
Sertraline 50mg PO nightly

Recommended Modifications Clinical Vignette 1:

1. Discontinue calcium carbonate and cholecalciferol-symptoms including anorexia, depression, increased pain, polyuria, and constipation may be consistent with hypercalcemia especially in the setting of his low albumin and elevated corrected calcium at 11.9mL/dL.
2. Discontinue sertraline and consider a quicker acting antidepressant like mirtazapine in this patient with a limited prognosis. Mirtazapine may be especially useful in patients with insomnia and decreased appetite. One study found that patients had a 74% higher response at two weeks with mirtazapine when compared to SSRIs.
3. Discontinue either the dexamethasone or Ibuprofen. Patients on both corticosteroids and NSAIDs have a 15 times increased risk of bleeding. If both medications are needed then GI prophylaxis with a proton-pump inhibitor would be indicated although recent guidelines do not recommend gastric prophylaxis for the use of a corticosteroid alone without other indications.

Literature Cited Clinical Vignette 1:

1. Zhao JG, Zeng XT, Wang J, Liu L. Association Between Calcium or Vitamin D Supplementation and Fracture Incidence in Community-Dwelling Older Adults: A Systematic Review and Meta-analysis. *JAMA*. 2017; 318(24):2466-2482.

2. Thase ME, Nierenberg AA, Vrijland P, et al. Remission with mirtazapine and selective serotonin reuptake inhibitors: a meta-analysis of individual patient data from 15 controlled trials of acute phase treatment of major depression. *Int Clin Psychopharmacol*. 2010; 25(4):189-98.
3. Piper JM, Ray WA, Daugherty JR, et al. Corticosteroid use and peptic ulcer disease: role of nonsteroidal anti-inflammatory drugs. *Ann Intern Med*. 1991; 114(9):735-740.

Clinical Vignette 2

Mrs. Duran is an 89 year-old-woman newly admitted to hospice with a hx of acute on chronic diastolic heart failure. Comorbidities include hypertension, hyperlipidemia, and GERD. Over the last 3 months she has experienced increasing fatigue, dry mouth, and “dizziness” with four falls while going to toilet. In addition, she has worsening lower extremity edema with furosemide recently increased to BID. Last documented physical exam only notable for ecchymoses with an abrasion to her left forehead with exam otherwise remarkable.

Acetaminophen 650 mg PO q 4 hours prn pain or fever

Atorvastatin 20 mg PO Daily

Amlodipine 10 mg PO daily

Furosemide 40mg PO BID

Losartan 100mg PO daily

Meclizine 25mg PO daily

Metoprolol 50mg PO BID

Omeprazole 20mg PO daily

Recommended Modifications for Clinical Vignette 2:

1. Check for postural hypotension and likely discontinue amlodipine-this presentation is concerning for hypotension contributing to the dizziness and even potentially falls although the association with falls is unclear. Amlodipine may also be contributing to her lower extremity edema.
2. Discontinue meclizine-this patient’s “dizziness” may simply be a result of her hypotension and the meclizine may simply be contributing to her xerostomia and fatigue.
3. Discontinue atorvastatin-a recent double-blinded randomized clinical trial found that for patients with no myocardial infarction or stroke in the last 6 months that discontinuing their statin was associated with increased quality of life with no change in mortality.

Literature Cited Clinical Vignette 2:

1. Sim JJ, Zhou H, Bhandari S, et al. Low systolic blood pressure from treatment and association with serious falls/syncope. *Am J Prev Med*. 2018;55(4):488-96.
2. Sink KM, Evans GW, Shorr RI, et al. Syncope, hypotension, and falls in the treatment of hypertension: results from the randomized clinical systolic blood pressure intervention trial. *J Am Geriatr Soc*. 2018;66(4):679-86.
3. American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 updated Beers Criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc*. 2015;63(11):2227-2246.
4. Kutner JS, Blatchford PJ, Taylor DH, et al. Safety and benefit of discontinuing statin therapy in the setting of advanced, life-limiting illness: a randomized clinical trial. *JAMA Intern Med*. 2015;175(5):691-700.

Clinical Vignette 3

Mr. Fitzpatrick is a 56-year-old man with renal cancer with bone metastases being admitted to home hospice. Comorbidities include hypertension, GERD, and hypothyroidism. Over the last 2 weeks he has experienced increasing pain in his abdomen, dizziness, fatigue, somnolence, and he is now taking his 20 mg morphine 8 times per day. During his last hospitalization 2 months prior his physical exam was unremarkable except for abdominal distension and trace lower extremity edema with labs demonstrating a Creatine 2.9 (GFR 20).

Docusate 100 mg PO daily
Gabapentin 600 mg PO TID
Levothyroxine 150 mcg PO daily
Lorazepam 0.5 mg PO q 8 hours prn for anxiety
Losartan 100mg PO daily
Morphine 20 mg PO q 3 hours prn pain or dyspnea
Ondansetron 4 mg PO q 4 hours prn for nausea
Omeprazole 20 mg PO daily

Recommended Modifications for Clinical Vignette 3:

1. Start a long-acting opiate-given the frequent use of breakthrough morphine with a daily oral morphine equivalent of between 66-75% of the current daily oral morphine equivalent, preferably in this situation one that is safe in renal failure like transdermal fentanyl.
2. Minimize renally toxic medications including the gabapentin and morphine-given the declining urine output in this patient with a hx of chronic kidney disease and elevated creatinine it is reasonable to minimize and taper potentially nephrotoxic medications. These would include gradually weaning the gabapentin to a dose of 700 mg or less daily for GFR 15-29 mL/min (300 or less if GFR less than 15 mL/min) especially given the increased dizziness, somnolence, and fatigue which may be signs of gabapentin toxicity.
3. Discontinue docusate and start senna-multiple randomized clinical trials have found a lack of efficacy of docusate in preventing opioid-induced constipation in patients with advanced cancer while senna has been found to be effective.

Literature Cited Clinical Vignette 3:

1. Smith C, Goldberg G. How should opioids be started and titrate in routine outpatient settings? In: Goldstein N, Morrison RS, eds. Evidence-Based Practice of Palliative Medicine. Philadelphia, PA: Elsevier; 2013:44-48.
2. Gelfman L, Chai E. Which opioids are safest and most effective in renal failure? In: Goldstein N, Morrison RS, eds. Evidence-Based Practice of Palliative Medicine. Philadelphia, PA: Elsevier; 2013:44-48.
3. Raouf M, Atkinson TJ, Crumb MW, et al. Rational dosing of gabapentin and pregabalin in chronic kidney disease. *J Pain Res.* 2017;10:275-278.
4. Yarumi Y, Wilson MP, Szafran O, et al. Randomized, double-blind, placebo-controlled trial of oral docusate in the management of constipation in hospice patients. *J Pain Symptom Manage.* 2013;45(1):2-13.

Clinical Vignette 4

Mr. Ryan is an 81-year-old man with Parkinson's disease complicated by advanced dementia. Comorbidities include hypertension, BPH, and depression. He resides in a skilled nursing facility and is dependent for all activities of daily living and is no longer communicative. He has experienced chronic nausea and tremor. Over the last couple days staff report he has experienced increased agitation and further loss of appetite with family opting to pursue comfort care and enroll in hospice care.

Carbidopa-levodopa 25-100 mg PO BID

Coconut oil 1000 mg 1 capsule daily

Cyanocobalamin (Vitamin B-12) 1000 mcg tablet PO daily

Donepezil 10mg PO daily

Folic acid 800 mcg PO daily

Haloperidol 1mg PO q 4 hours prn for nausea or agitation

Multivitamin 1 tablet PO daily

Tamsulosin 0.4 mg ER daily after dinner

Vitamin A, C, and E-lutein-minerals 1000/200/60/2mg 1tab PO daily

Vitamin E 400 units PO daily

Recommended Modifications Clinical Vignette 4:

1. Discontinue haloperidol-given the high risk of exacerbating symptoms including rigidity, bradykinesia, and others it may be prudent to use quetiapine, clozapine, or another atypical antipsychotic if nonpharmacological methods are unsuccessful.
2. Taper donepezil-given the advanced stage of dementia and the patient's poor functional status and potential toxicity including the chronic nausea and tremor. Experts recommend tapering cholinesterase inhibitors off in patients with no response after 3 months or if signs of toxicity.
3. Reduce vitamins-in this patient with polypharmacy declining medications, it is helpful to prioritize his critical medications and minimize medications with limited value including his multivitamin, vitamin E, and Vitamin A, C, and E-lutein supplements.

Literature Cited Clinical Vignette 4:

1. Divac N, Stojanovic R, Savic V, et al. The efficacy and safety of antipsychotic medications in the treatment of psychosis in patients with Parkinson's disease. *Behav Neurol*. 2016;1:1-6.
2. Buckley JS, Salpeter SR. A risk-benefit assessment of dementia medications: systematic review of the evidence. *Drugs Aging*. 2015;32(6):453-467.
3. Todd A, Husband A, Andrew I, et al. Inappropriate prescribing of preventative medication in patients with life-limiting illness: a systematic review. *BMJ Support Palliat Care*. 2017;7(2):113-121.