National Alliance for Care at Home

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Hospice Medication Deprescribing Toolkit

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Introduction

The NHPCO Hospice Medication Deprescribing Toolkit was originally developed by the MyNHPCO Pharmacist Community and released by NHPCO in 2020 as a companion resource to the NHPCO Medication Flow Chart – Determination of Hospice Medication Coverage. This updated Alliance Hospice Medication Deprescribing Toolkit provides additional evidence for evaluating medication appropriateness for seriously ill patients. Decision trees in the flow chart describe opportunities for deprescribing medications at the end of life. This collection of independent deprescribing guidance documents can assist hospice agencies when evaluating if medications should be continued at the current dose/regimen or deprescribed.

This toolkit is made available by the MyNHPCO Pharmacist Community in collaboration with other MyNHPCO Community members, and numerous hospice professionals. The following individuals are recognized for their effort in the development of this toolkit.

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Disclaimer

All clinical recommendations contained herein are intended to assist with determining the appropriate therapy for the patient. Responsibility for final decisions and actions related to care of specific patients shall remain the obligation of the institution, its staff, and the patient's attending physicians. Nothing in this document shall be deemed to constitute the providing of medical care or the diagnosis of any medical condition. Use of product brand names are intended to assist the clinician in identifying products and does not connote endorsement or promotion of any kind. No financial support for the development of this toolkit was provided by any product, vendor, or manufacturer.

Are Your Patient's Pills a Burden? Discussing Polypharmacy and Deprescribing with Patients & Providers

Medication Appropriateness[1-2]

Medication appropriateness refers to prescribing the right medication, at the right dose, for the right patient, and for the right duration of therapy. Patients identified as being further along an illness trajectory with updated goals of care often have medications in their drug profile that no longer meet these criteria. Providers should consider the anticipated life expectancy of a patient in comparison with the time to therapeutic benefit of medications previously prescribed for primary or secondary prevention of disease. All medications included in a hospice patient's drug profile should be individualized, evaluated for appropriateness, and monitored by members of the interdisciplinary team, under the supervision of the hospice physician.

Pill Burden and its Impact on Patients[3-8]

Pill burden describes how taking medications can place challenges or inconveniences on someone's life. Polypharmacy, taking 5 or more medications per day, is the main contributor to pill burden for most patients. In end-of-life care, patients are at high risk of polypharmacy, averaging more than 11 medications. Whether defined by a number, or by polypharmacy's impact on patient care, focusing on eliminating medications that are no longer necessary or appropriate for patients with a limited prognosis can reduce pill burden and improve quality of life. Challenges created by polypharmacy include:

Complicated medication routines: Taking multiple medications, multiple times per day. For example, most patients taking more than 3 or 4 medications will require at least twice a day dosing. Each additional medication increases the complexity of the daily pill-taking regimen. More than one prescriber or using more than one pharmacy adds even more burden and risk to the medication use process. Unless prescription pick-up times are synchronized at a single pharmacy, that also means repeated visits to the pharmacy for medication refills. If someone has multiple prescribers, the likelihood that each prescriber and the pharmacy have an accurate and complete list of all of medications is low. When patients self-select over-the-counter (OTC) medications and natural or herbal products, they may forget to inform their healthcare team.

Medication characteristics: Medications may look very different in size and shape. With generic medication substitutions at the pharmacy, the appearance of a medication may change at the time of refills. People with multiple medical issues may need to take multiple forms of medications – injections for diabetes, pills for cardiovascular disease, transdermal patches for pain, and inhalers for COPD. Inhalers are a

particular challenge because each type of inhaler has different instructions for use. If the patient has any level of cognitive impairment, the risk of potentially harmful medication errors can greatly increase.

Medication adverse effects: The more medications a patient takes, the higher the risk of drug interactions and drug side effects. Side effects can sometimes be so troublesome for patients that they stop taking the medication and risk worsening of their health condition. Medication side effects can lead to polypharmacy (known as a prescribing cascade) when those side effects are managed by adding another medication. In the case of using laxatives to manage the constipation from opioids, the addition is necessary because the opioid is needed to control pain; the side effect of constipation will not lessen over time and must be managed for the comfort of the patient. However, using a medication for incontinence, a common side effect of dementia medications like donepezil (Aricept) may improve the incontinence but may worsen cognition and lead to dry mouth and constipation.

Social and family impact: As patients become frailer and more reliant on family members for support, pill burden begins to impact family caregivers. Depending on patient health insurance coverage and the rising price of prescription medications, the financial impact can strain the family budget.

Tips for Reducing Polypharmacy and Pill Burden[9-12]

Keep patient-centered care aimed at improving quality of life as the focus of both interdisciplinary team (IDT) meetings and patient-family discussions; target symptom improvement over changes in lab values. Reduction in polypharmacy often leads to improvements in patient-reported wellbeing without significant adverse reactions. See Figure 1 for an example of a de-prescribing algorithm.

- **If patients are not able to adhere to a prescribed medication regimen,** ask if they are concerned about side effects, tired of taking so many medications, or how well they feel the medications are helping to manage their symptoms.
- **Reassess each medication for ongoing indication and need.** In hospice, if a medication is intended for disease prevention rather than palliating a symptom, consider tapering and discontinuing the medication.
- **Engage other IDT members to assist managing symptoms such as pain or dyspnea.** Hospice social workers, spiritual care counselors, and other therapists can help plan non-pharmacologic interventions to help manage symptoms without adding to pill burden.
- **If possible, use once daily or twice daily dosing options instead of multiple daily doses.** Optimize the dose of long-acting pain medications so the patient doesn't need to rely on multiple breakthrough doses to control pain.

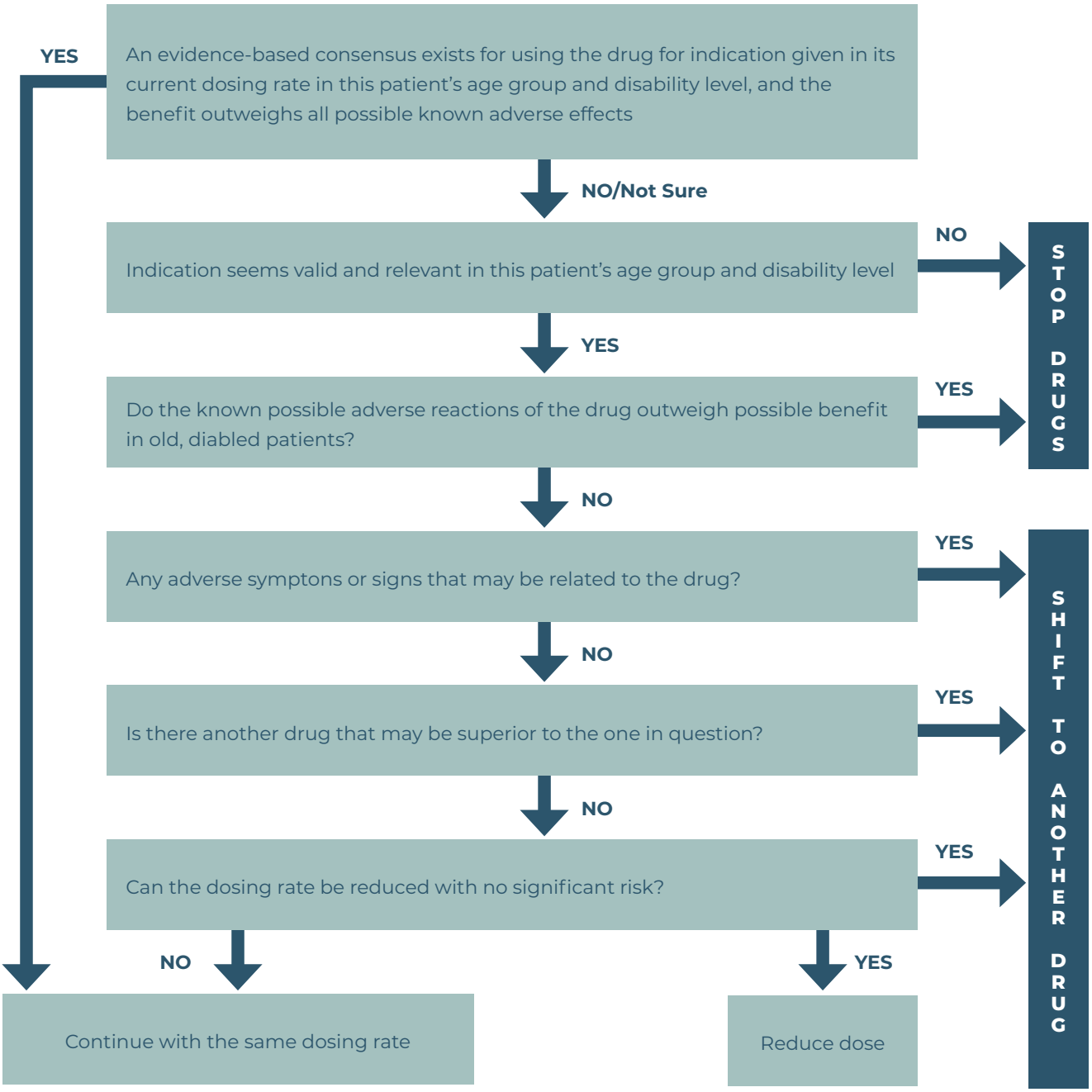
Deprescribing in Hospice[13-15]

Deprescribing is the planned, supervised process of dose reduction or stopping of medications that may cause more harm than benefit. Deprescribing is vital for the optimal management of chronic conditions and is not a practice specific to patients living with a terminal illness. The goal of deprescribing is to reduce the burden of medications and to maintain or improve quality of life. Thus, deprescribing is recognized as an essential part of good prescribing practices. Deprescribing often results in decreased pill burden and polypharmacy, and

increased quality of life. Tapering or stopping medications can, in some cases, result in adverse withdrawal events or worsening of underlying conditions. Therefore, the practice should be completed cautiously, under the supervision of the patient's attending physician, with input from the interdisciplinary team. While deprescribing is not a practice unique to the hospice population, our patients are often excellent candidates for medication deprescribing, as they are more likely to experience medication adverse effects and pill burden, with life expectancies that are poorly matched with the time to therapeutic benefit of maintenance medications.

FIGURE 1. GARFINKEL DE-PRESCRIBING ALGORITHM[10,12]

Discuss the following with the patient/guardian



Algorithm adapted from: *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*

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National Alliance for Care at Home

Antidepressants in Hospice Patients

DEPRESCRIBING GUIDANCE

Deprescribing Antidepressants in Hospice Patients

DEPRESCRIBING GUIDANCE

Background

Antidepressants are among the most common medications that hospice patients receive. Certain classes are also prescribed to treat conditions or symptoms at end-of-life other than major depressive disorder (MDD; aka unipolar depression), such as anxiety, neuropathic pain, and insomnia. Table 1 lists antidepressants by pharmacologic category, as well as common indications for which they are prescribed to hospice patients.

Most commonly, antidepressant use in hospice patients is continued until death or until patients transition to an active dying phase where all medications except those that provide immediate comfort are discontinued (i.e., comfort measures only). However, there are occasionally circumstances that warrant earlier antidepressant deprescribing.

TABLE 1: ANTIDEPRESSANTS BY PHARMACOLOGIC CATEGORY

Pharmacologic category	Medications in category	Common end-of-life indications for use besides depression
Selective serotonin reuptake inhibitors (SSRIs)	**Escitalopram (Lexapro)** **Fluoxetine (Prozac)** Fluvoxamine (Luvox) **Paroxetine (Paxil)** **Sertraline (Zoloft)**	• Generalized anxiety disorder • Behavioral psychological symptoms of dementia (escitalopram, citalopram)*
Serotonin norepinephrine reuptake inhibitors (SNRIs)	Desvenlafaxine (Pristiq) **Duloxetine (Cymbalta)** Levomilnacipran (Fetzima) Milnacipran (Savella) **Venlafaxine (Effexor)**	• Generalized anxiety disorder (not levomilnacipran, milnacipran) • Neuropathic pain (duloxetine)
Serotonin modulators	Nefazodone (Serzone) **Trazodone (Desyrel)** Vilazodone (Viibryd) Vortioxetine (Trintellix)	• Insomnia (trazodone)* • Agitated behaviors associated with dementia (trazodone)*
Tricyclic antidepressants (TCAs)	**Amitriptyline (Elavil)** Amoxapine (Asendin) Clomipramine (Anafranil) Desipramine (Norpramin) **Doxepin (Sinequan, Silenor)** Imipramine (Tofranil) **Nortriptyline (Pamelor)** Protriptyline (Vivactil) Trimipramine (Surmontil)	• Neuropathic pain* • Insomnia (doxepin doses ≤ 6mg per day)

Pharmacologic category	Medications in category	Common end-of-life indications for use besides depression
Atypical antidepressants	**Bupropion (Wellbutrin)** **Mirtazapine (Remeron)**	• Insomnia (mirtazapine; doses ≤ 15mg per day)* • Cachexia (mirtazapine)*
Monoamine oxidase inhibitors (MAOIs)	Isocarboxazid (Marplan) Phenelzine (Nardil) Selegiline (Emsam) Tranylcypromine (Parnate)	

** Off-label indication; bold = commonly encountered in hospice & palliative care*

Why Deprescribe?

Deprescribing antidepressants is recommended if contraindications are present that preclude safe use or when significant adverse drug effects are suspected. Two severe antidepressant side effects that warrant prompt deprescribing are serotonin syndrome (SS) and syndrome of inappropriate antidiuretic hormone secretion (SIADH).[1-2] Additional examples that arise in the hospice setting include:

- Bupropion use is contraindicated in patients with seizure disorders[3]
- Duloxetine use is generally not recommended in patients with liver cirrhosis[4]
- TCAs are generally poorly tolerated in elderly patients (particularly those with dementia) due to their anticholinergic side effects[5]

Less commonly, antidepressants may no longer be needed. In particular, they could reasonably be deemed unnecessary if the following conditions are met:

- The indication for which they were prescribed is no longer present, and
- The recommended treatment duration has been met or exceeded (i.e., prescribed several years ago for depression that is now in remission), and
- Additional symptoms unrelated to the original indication that may benefit from continued use are absent (i.e., make sure patient does not have anxiety, even if SSRI originally prescribed for depression, since SSRIs are effective anxiolytics)

Finally, if patients no longer wish to take antidepressants, that is a valid reason to deprescribe, provided they have been adequately apprised of the potential risks and benefits of stopping vs. continuing. Drug interactions involving antidepressants or minor side effects are often better addressed by changing antidepressant therapy vs. deprescribing which would leave depression and/or other antidepressant-responsive symptoms untreated.

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers.6 The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

Talking points that may help facilitate the deprescribing process include:

- I know you've been taking your antidepressant for a long time, so it's completely understandable to have apprehension about stopping it – let me explain why the doctor feels like it's no longer safe to remain on it.
- Even though the drug is called an antidepressant, I want to make sure you're aware that many antidepressants are prescribed for other reasons besides or in addition to depressive symptoms.
- Stopping antidepressants abruptly or too quickly can make you feel unwell. Even though these feelings are often short-lived, we feel it's best to wean you off your antidepressant over a period of a few weeks to reduce the likelihood of that happening.
- How have you felt since stopping your antidepressant? Have you had any new problems?[7]

How to Deprescribe[7]

In most cases, antidepressants should be tapered instead of abruptly discontinued to avoid antidepressant discontinuation syndrome (aka withdrawal reaction, withdrawal syndrome - Table 2). Tapering also likely reduces the risk of recurrence of the disorder(s) for which the antidepressant was originally prescribed. Specific taper durations are listed in table 3. The dosing during an antidepressant taper will vary, depending on the current antidepressant dose and its available formulations. Liquid SSRI formulations exist and can help facilitate tapers since non-commercially available doses can be measured.

TABLE 2: ANTIDEPRESSANT DISCONTINUATION SYNDROME SYMPTOMS[7]

Most common:	Common:		Less common:	
• Dizziness • Fatigue • Headache • Nausea	• Agitation • Anxiety • Chills • Dysphoria • "Electric shock" and/or "pins and needles" sensations	• Insomnia • Irritability • Muscle aches • Runny nose • Sweating • Tremor • Vivid dreams	• Imbalance • Cognitive impairment • Diarrhea • Extrapyramidal symptoms • Hypertension	• Hypomania / mania Psychoses • Suicidal ideation • Tinnitus • Vomiting

TABLE 3: RECOMMENDED ANTIDEPRESSANT TAPER DURATIONS[7]

Taper duration	Antidepressant / class
None	• Any antidepressant if treatment duration < 2 weeks • Any antidepressant if severe adverse effects (e.g., SS, SIADH) • Fluoxetine (1-2 week taper optional) • Nefazodone (1-2 week taper optional) • Vilazodone 10mg • Vortioxetine 10mg
1 week	• Vortioxetine 15mg or 20mg
1-2 weeks	• Any antidepressant if treatment duration 2-3 weeks (unless shorter taper listed above) • Fluoxetine (no taper optional) • Nefazodone (no taper optional) • Vilazodone 20mg or 40mg
2 weeks	• Bupropion (shorter taper may be reasonable, as discontinuation symptoms are uncommon)
2-4 weeks	• SSRIs except fluoxetine, fluvoxamine, paroxetine • SNRIs except venlafaxine • TCAs • Mirtazapine • Trazodone
3-4 weeks	• Fluvoxamine • Paroxetine
4 weeks	• Venlafaxine
≥ 4 weeks	• MAOIs

During antidepressant tapers, patients should be monitored for recurrence of condition(s) and development of antidepressant discontinuation syndrome, which can occur despite tapering. Because some of the symptoms of discontinuation syndrome are inherently common among hospice patients (e.g., fatigue, nausea, agitation, anxiety, dysphoria, insomnia), careful attention should be paid to baseline symptoms and development of any new symptoms. Likewise, many of the symptoms of discontinuation syndrome also occur with depressive and/or anxiety disorders, complicating differentiation between discontinuation syndrome and relapse. The presence of nausea or shock-like / pins and needles sensations can be useful in making a distinction, as they are not associated with depression or anxiety.

Patients should be reassured that any antidepressant discontinuation syndrome symptoms that occur during the tapering process are likely to be transient. Severe symptoms, though rare, can be palliated by common hospice medications, or, if consistent the goals of care, restarting the antidepressant usually resolves these symptoms within a few days.

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Antihypertensive Medications

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Antihypertensive Medications

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Background[1-4]

Hypertension is treated with a combination of lifestyle modifications and antihypertensive medication(s). Many antihypertensive medications may also be prescribed for additional FDA-approved and off-label indications. Common examples include angina, atrial fibrillation, and renal failure. Current guidelines for the treatment of cardiovascular disease highlight treatment options for conditions, including hypertension. However, few guidelines provide clinical considerations on when treatment may no longer be necessary or advise how to discontinue antihypertensives or other treatments. Antihypertensives can cause serious adverse effects in elderly and seriously ill patients, including orthostatic hypotension, dizziness, and fatigue.

Antihypertensive Medication Classes & Select Examples[3]	Common Class Adverse Effects[3]
Angiotensin-converting enzyme (ACE) Inhibitors	
Enalapril (Vasotec) Lisinopril (Zestril, Prinivil) Ramipril (Altace)	Hyperkalemia, dry cough, angioedema
Angiotensin Receptor Blockers (ARBs)	
Irbesartan (Avapro) Losartan (Cozaar) Valsartan (Diovan)	Hyperkalemia, angioedema, chest pain, diarrhea
Alpha-1 Blockers	
Doxazosin (Cardura) Prazosin (Minipress) Terazosin (Hytrin)	Orthostatic hypotension, edema
Alpha-2 Agonists	
Clonidine (Catapres) Guanfacine (Tenex) Methyldopa (Aldomet)	Orthostatic hypotension, anticholinergic side effects, edema
Beta-Blockers	
Atenolol (Tenormin) Bisoprolol (Zebeta) Carvedilol (Coreg) Labetalol (Trandate) Metoprolol (Lopressor, Toprol-XL) Nadolol (Corgard)	Bradycardia, bronchospasms (non-selective), cold extremities, mask symptoms of hypoglycemia
Dihydropyridine (DHP) Calcium Channel Blockers	
Amlodipine (Norvasc) Nifedipine (Adalat CC, Nifedical CC)	Edema, flushing, headache

Antihypertensive Medication Classes & Select Examples[3]	Common Class Adverse Effects[3]
Non-Dihydropyridine (Non-DHP) Calcium Channel Blockers	
Diltiazem (Cardizem, Cartia XT, Dilacor XR) Verapamil (Calan, Verelan)	Edema, bradycardia, constipation, flushing
Loop Diuretics	
Bumetanide (Bumex) Furosemide (Lasix) Torsemide (Demadex)	Electrolyte imbalance, dehydration, nocturnal diuresis
Thiazide Diuretics	
Chlorthalidone (Hygroton) Hydrochlorothiazide (Hydrodiuril) Metolazone (Zaroxolyn)	Electrolyte imbalance, dehydration, nocturnal diuresis, dizziness, blurred vision
Direct Arterial Vasodilators	
Hydralazine (Apresoline)	Headache, palpitations, angina, sodium and water retention

Why Deprescribe?[4-9]

There is no consensus guideline recommendation for blood pressure goals in medically frail or terminally ill patients. Additionally, there are few age-based recommendations on safe blood pressure averages in elderly patients. The 2017 American College of Cardiology (ACC)/American Heart Association (AHA) Guidelines for the Management of High Blood Pressure in Adults recommend a goal systolic blood pressure of <130 mm Hg for patients 65 years or older. However other guidelines recommend a more conservative goal of <150/90 mm Hg for older patients. The 2017 ACC/AHA guidelines recommend using clinical judgement, patient preference, and a team-based approach to assessing risk vs benefit of antihypertensive medications in patients with a limited life expectancy. A treatment goal of <150/90 mm Hg is likely appropriate for most hospice patients. Individualized shared decision making should consider the patient's goals of care, experienced or likely adverse effects, patient safety and the impact on quality of life.

Hospice Antihypertensive Considerations:

- **Primary prevention of cardiovascular disease,** focusing on disease prevention, is no longer practical for patients with a limited illness trajectory. The time to benefit of antihypertensives is expected to be longer than a hospice patient's life expectancy.
- **Medication appropriateness determinations should consider all cardiovascular conditions present**. Deprescribing considerations for antihypertensive medications will be dependent on the presence of heart failure, angina, atrial fibrillation or flutter, or a recent vascular event like a stroke or myocardial infarction (MI). Patients with significant comorbid cardiovascular disease may receive some continued benefit from antihypertensive medications, outside of blood pressure control.
- **Blood pressure is typically lower as patients are nearing end-of-life.** The risk of hypotension, dizziness, and falls may be potentiated for those patients continuing one or more antihypertensives, even if historical blood pressure readings have been consistent.

- **Antihypertensives require a gradual taper and should not be discontinued abruptly.** Proactively considering a dose reduction before a patient experiences dysphagia assists in avoiding adverse drug withdrawal effects. For example, abrupt discontinuation of beta-blockers may trigger tachycardia and angina and abrupt discontinuation of alpha-agonists may cause rebound hypertension (headache, nausea, flushing, lightheadedness, anxiety).

Patient & Caregiver Talking Points[1,3,10-11]

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers. The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

Educate patients and caregivers about how changes in conditions affect treatment and the risk of strict blood pressure control. Provide information on the signs and symptoms of orthostatic hypotension, along with common adverse effects associated with antihypertensives on the patient's drug profile. If appropriate, recommend less frequent blood pressure checks, unless the patient is symptomatic.

- Orthostatic hypotension: dizziness, lightheadedness, blurred vision, weakness, fatigue, nausea, palpitations, headache, syncope, dyspnea, chest pain

Patients and caregivers may have a difficult time accepting that monitoring and medication regimens are less stringent during hospice care. This is especially true for patients who for years have heard of the importance of monitoring blood pressure and targeting a "normal" blood pressure. Patients may feel a sense of abandonment or assume death is imminent. Acknowledge concerns surrounding deprescribing medications for hypertension. Use language that allows the patient and their support unit time to process information while encouraging continued thought. Continue to return to the conversation at future visits.

Adverse drug events, bothersome side effects, disease progression may require a direct discussion and medication profile review. A new onset adverse event, symptom, side effect, or sign of disease progression are good opportunities to discuss medication appropriateness and deprescribing to preserve quality of life.

Focusing on the patient's comorbidities and goals of care, encourage shared decision-making by developing an updated plan of care. Ask about fears and expectations associated with antihypertensive therapy. Use positive language and offer options to the patient and caregivers.

- We understand that it can be stressful or overwhelming to consider changing your medication regimen. If you're not ready to consider a change, we can talk about this next week.

- I've noted that your goal is to be as comfortable as possible. Right now, it seems your metoprolol may be causing some of the problems interfering with your daily life that you've described today. Are you consistently noticing more drowsiness and dizziness when you stand up?
- I'm concerned that as your mom is drinking less, her blood pressure medication may become harmful. We often find that people taking chlorthalidone can experience dehydration and associated side effects that make falls and confusion more likely. How would you feel if we discussed optimizing some of her blood pressure medicines so that she is comfortable and safe?
- We often find that people taking blood pressure medicines might not benefit from their medicines like they once did, and that blood pressure goals are a bit higher as we age. I'm concerned that some of your medicines may be causing the worsening dizziness and lightheadedness you've been telling me about. How would you feel if I spoke with my team to see if we can suggest updates to your medicine list that reduce your side effects?

How to Deprescribe[3,9,11-15]

Once the decision has been made to deprescribe antihypertensive medications, they should be gradually tapered. Ideally, antihypertensives should proactively tapered and discontinued before a patient loses the ability to swallow. For some patients it may be appropriate to consolidate therapy or continue a single agent as opposed to discontinuing all antihypertensive medications. Clinical criteria on how to deprescribe antihypertensive agents varies by drug class. Patient and caregivers should be educated on the most likely adverse withdrawal events.

Antihypertensive Medication Class Tapering Examples	
Class	**Recommendation**
Alpha-2 Agonists (Clonidine)	• For patients on a beta-blocker and clonidine, withdraw the beta-blocker first, at least 3 to 5 days before clonidine withdrawal, then slowly decrease clonidine. • Discontinue slowly over 6-10 days by reducing the dose by 30-50% every 2 to 3 days • Rebound hypertension and withdrawal symptoms may be less likely with transdermal clonidine
Beta-Blockers	• Gradually taper over 1-2 weeks to avoid tachycardia, hypertension, angina, and/or ischemia
Calcium Channel Blockers	• Consider gradual reduction • Sudden withdrawal may exacerbate angina

REASONABLE TREATMENT GOALS IN HOSPICE

- Avoid hypotension while minimizing symptoms of sustained hypertension.
- Simplification of complex regimens.
  - Discontinue one or more antihypertensive agents.
  - Discontinue diuretic regimens as patients are eating and drinking less routinely. Consider discontinuing potassium and magnesium supplementation in tandem with discontinuing diuretic therapy.
- Minimize the burdens of treatment.
  - Discontinue frequent, scheduled blood pressure monitoring.
  - Reduce medications to reduce pill burden.
- When limited life expectancy makes long-term benefit uncertain, a reasonable blood pressure goal for most hospice patients is <150/90 mm Hg.

References & Additional Resources[11,14]

Some antihypertensive medications provide symptom relief. It is important to consider all patient characteristics and comorbidities when evaluating medication appropriateness.

Antihypertensive Medications & Symptom Relief		
Class	**Symptom Benefit**	**Comments**
Angiotensin-converting enzyme (ACE) Inhibitors	Likely	• May reduce mortality or hospitalizations, equivalent to ARB in heart failure • Discontinue or reduce dose if symptomatic hypotension is present • Risk of irritating cough, hyperkalemia, angioedema
Angiotensin Receptor Blockers (ARBs)	Likely	• May reduce mortality or hospitalizations, equivalent to ACE in heart failure • Discontinue or reduce dose if symptomatic hypotension is present • For patients with ACE intolerance
Alpha-1 Blockers	Possibly	• Primarily used to manage BPH • Tamsulosin, alfuzosin, silodosin tend to have less hypotensive effect than terazosin and doxazosin • Discontinue in patients with fall risk or hypotension • Discontinue in patients with urinary (Foley) catheter. **Note:** catheter replacement and reinsertion may be more difficult after alpha blocker discontinuation.
Alpha-2 Agonists (Clonidine)	Possibly	• Interaction with beta-blockers. Beta-blocker must be withdrawn several days before discontinuation of clonidine to avoid severe rebound hypertension • Off-label uses include management of opioid withdrawal, migraine headaches, and pain

Antihypertensive Medications & Symptom Relief		
Class	**Symptom Benefit**	**Comments**
Beta-Blockers	Likely	• Usually not initiated in hospice, but may reduce mortality in heart failure • Reduce dose if bradycardia present • Discontinue or reduce dose if hypotension present after ACE or ARB stopped • **Note:** This class is frequently used for indications outside of hyperten-sion. Non-selective agents may be prescribed for conditions like mi-graines or portal hypertension and the prevention of bleeds in cirrhosis patients with esophageal varices.
DHP Calcium Channel Blockers	Limited	• Consider for patients with angina despite treatment with beta-blockers and nitrates (amlodipine, felodipine) • May exacerbate peripheral edema
Non- DHP Calcium Channel Blockers	Limited	• May help with rate control of atrial fibrillation in patients that cannot tolerate beta-blockers • May exacerbate peripheral edema
Loop Diuretics	Likely	• Continue for symptom management • Monitor for hypovolemia, dehydration, hypokalemia • Dose adjustments may be necessary to overcome diuretic resistance
Thiazide Diuretics	Possibly	• Risk of hypovolemia and electrolyte disturbance • Metolazone may be helpful to overcome loop diuretic resistance
Direct Arterial Vasodilators (Hydralazine)	Possibly	• May reduce mortality or hospitalizations in heart failure • Hydralazine may be more effective in African Americans

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Disclaimer

All clinical recommendations contained herein are intended to assist with determining the appropriate therapy for the patient. Responsibility for final decisions and actions related to care of specific patients shall remain the obligation of the institution, its staff, and the patient's attending physicians. Nothing in this document shall be deemed to constitute the providing of medical care or the diagnosis of any medical condition. Use of product brand names are intended to assist the clinician in identifying products and does not connote endorsement or promotion of any kind. No financial support for the development of this toolkit was provided by any product, vendor, or manufacturer.

National Alliance for Care at Home

Antiplatelet & Anticoagulant Medications

DEPRESCRIBING GUIDANCE

Antiplatelet & Anticoagulant Medications

DEPRESCRIBING GUIDANCE

Background

Many patients are admitted to hospice services already receiving antiplatelet or anticoagulant medications (collectively called antithrombotic medications). These tend to be patients with a history of atrial fibrillation, significant cardiovascular and/or cerebrovascular disease, or those who've had a blood clot related to cancer. Research tells us that 7% of hospice patients are receiving some sort of antithrombotic therapy at the time of enrollment.[1] Furthermore, 60% of hospice patients receiving antithrombotic therapy see it being continued up until the final three months of life, and of those patients, 75% see it continued until the last week of life.[2]

Antiplatelet medications prevent blood clots by inhibiting platelet aggregation and decrease the risk of death from cardiovascular events such as myocardial infarction (MI), ischemic stroke, angina, or peripheral arterial disease.[3] Anticoagulant medications also prevent blood clots but instead of inhibiting platelets, they prevent blood coagulation by reducing the action of clotting factors directly or indirectly. Anticoagulants are also used to prevent clotting in patients with atrial fibrillation, thromboembolic disease, and artificial heart valves.[3]

TABLE 1 – ANTIPLATELET AND ANTICOAGULANT MEDICATIONS

Antiplatelet Medications					
Aspirin	Clopidogrel (Plavix)	Tiagrelor (Brilinta)	Prasugrel (Effient)	Aspirin-Dipyridamole (Aggrenox)	
Anticoagulant Medications					
Warfarin (Coumadin)	Apixaban (Eliquis)	Rivaroxaban (Xarelto)	Dabigatran (Pradaxa)	Enoxaparin (Lovenox)	Edoxaban (Savaysa)

While anticoagulants are generally used to prevent future thromboembolic events, they also are used to treat a thromboembolism, which can be accompanied by pain, swelling, or dyspnea. When used in this regard, anticoagulants should be considered palliative care.

The decision to discontinue antiplatelet and anticoagulant medications should always be an individualized approach, weighing the risks vs benefits, and the patient and family's goals of care. While there are no studies determining risk vs benefit of these medications in hospice or palliative care, there are ways to attempt to quantify the patient's risk of either continuing or discontinuing these medications. These methods include tools used in the non-hospice population to look at both thromboembolism and bleeding risks, which providers may then choose to extrapolate to the hospice and palliative care patient.

- The CHA_2DS_2-VASc score was developed to include common stroke risk factors and modifiers to identify the annualized risk of stroke for patients with atrial fibrillation.[4]

- The HAS-BLED score estimates the risk of major bleeding for patients receiving anticoagulation for atrial fibrillation.[5]
- The recently developed DOAC Score can help stratify the bleeding risk for patients with atrial fibrillation who receive therapy with rivaroxaban, apixaban, dabigatran, or edoxaban.[6]

ASSESSING VTE RISK[2]

It's important to look at both the risk of bleeding and the risk of thrombosis when evaluating antithrombotic medications.

For patients receiving anticoagulants, those at high risk of thrombosis include those with:

- Valve replacement
- Intracardiac thrombus
- A thromboembolic event (including deep vein thrombosis) with indication for indefinite anticoagulation
- Atrial fibrillation with CHA_2DS_2-VASc score of 8-9
- Atrial fibrillation with heart valve or recent (past six months) cerebrovascular accident (CVA)/TIA
- Cancers with high thromboembolic risk, including stomach, pancreas, lung, lymphoma, gynecologic, bladder, testicular, renal

ASPIRIN

While aspirin is the original antiplatelet medication, recently updated guidelines highlight the risk of major bleeding from aspirin that increases markedly in older age.[7] In addition, these guidelines suggest:

- When aspirin is used for the primary prevention of cardiovascular events in elderly patients, the risk of bleeding outweighs the benefit
- Patients with atrial fibrillation at risk of stroke who are receiving anticoagulation should not receive aspirin alone or in combination with clopidogrel unless they also have an indication for antiplatelet therapy.
- Aspirin can be used in combination with clopidogrel or prasugrel in dual antiplatelet therapy (DAPT) for patients with acute coronary syndrome (ACS) or following stent placement.
- DAPT therapy following stroke or transient ischemic attack (TIA) is not recommended beyond 90 days, as there is no evidence suggesting DAPT provides advantages over the use of aspirin or clopidogrel alone for stroke prevention, but does increase bleeding risk.

When these patients also have a high bleeding risk (HAS-BLED > 3 or DOAC Score >8), deprescribing may be indicated.

When these patients have a low bleeding risk, continued therapy can be considered until other deprescribing considerations are identified.

For patients receiving antiplatelet medications, those at high risk of thromboembolism include:

- Recent (<6 weeks) Bare metal stent or percutaneous coronary intervention
- Recent (< 3 months) CVA/TIA
- Recent (<12 months) Drug-eluting stent or high risk coronary stent

These patients should be continued on antiplatelet therapy until other deprescribing considerations are identified.

Why Deprescribe?

Deprescribing Considerations	
Patient at high risk for bleeding	• Increased risk for major bleeding complications is present in patients on antithrombotic therapy who also have advanced age, cognitive impairment, hypertension, renal disease, liver disease, prior history of bleeding, and heavy alcohol use.[5, 8-11] • Bleeding risk assessment tools, such as the HAS-BLED and DOAC Score can be used to assist clinicians in identifying patients at high risk for bleeding.[5] • Ensure patient/caregivers are aware that agents for reversing bleeding may be difficult to access and require hospitalization.
Medication may no longer be indicated	• No longer deemed to be of palliative benefit (i.e. not actively treating an acute, symptomatic embolism) • Imminent death • Indication for use has time-limited benefit (e.g. after a procedure or event)
Patient at high risk for falls	• Increased risk of falling occurs as hospice patients become more frail and less ambulatory • Ongoing fall risk should be assessed for all patients receiving antithrombotic medications
Patient at risk for drug-drug interactions	• Drug interactions are common with these classes of medications, which can increase bleeding risk.[3] • Review medication profile with a pharmacist when adding or discontinuing any medications or supplements
Decreased renal or hepatic function	• Many antithrombotic medications rely on liver metabolism and/or renal clearance.[3] • Decreased renal or hepatic function may increase bleeding risk.
Changes in nutritional intake	• Patients with low albumin and/or proteinuria could have increased risk of bleeding from highly protein-bound medications like apixaban and rivaroxaban.[12] • Fluctuating INRs may occur with warfarin due to nutrition changes • Rivaroxaban absorption is improved when given with food[13]
Difficulty swallowing	• Splitting non-scored tablets is generally not recommended due to concerns about absorption and dose equivalency in split tablets • Dabigatran capsules should not be opened, crushed, or dissolved per manufacturer specifications[14]
Increased pill burden and monitoring	• Antithrombotic medications contribute to polypharmacy and pill burden • Warfarin requires PT/INR testing. Inability to consistently maintain therapeutic INR decreases effectiveness and/or increases bleeding risk.
Hospice goals of care	• No injections (LMWH)

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers.[9] The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver dicussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

- Acknowledge that patient and family concern about medication changes, especially stopping medications is common response.
- Provide reassurance that all medication changes are made in consultation with the patient's doctors. The decision to stop antiplatelet and anticoagulant medications is always an individualized approach.
- Ask the patient and family questions to bring them into the shared decision-making process. Use open ended questions that lead into conversations about stopping medications.
  - "Do you know why you are taking this medication? Is it hard to take all these pills every day? Do you ever feel worse after taking this pill? Have you noticed your wife is eating less than she used to? Have you felt unsteady when walking lately? Are you worried about your mom falling? What are your goals now that your dad is on hospice?"
- Explain that as patients age or diseases progress, certain medications that were once helpful can become harmful. The hospice team's role is to enhance comfort and quality of life by providing effective and safe medications, treating physical and emotional symptoms, and minimizing adverse events.
  - "Dr. Jones would like to discuss stopping your wife's blood thinner (or anticoagulant) medication. You've shared that she has fallen a few times over the past month, so he is concerned that risk of her experiencing a serious bleeding complication may now outweigh the benefit of preventing a stroke while she is under hospice care."

Remind the patient and family that the hospice team will regularly reassess the patient's condition and medications

Reassess the patient at each visit for change of condition to perform an ongoing risk vs. benefit evaluation for continuing antithrombotic medications.

How to Deprescribe

- Once the decision has been made to discontinue antiplatelet or anticoagulant medications, they may be stopped without a taper.
- If family or patient is hesitant to discontinue, consider a trial discontinuation for a limited period of time (e.g., 2 weeks or 1 month) and offer to re-evaluate once that trial is completed. Often, the family or patient needs this time as an "adjustment period" to accept the possibility of discontinuation, understand the medication is not helping, and realize that continuation is not necessary.

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National Alliance for Care at Home

Antiretroviral Medications for HIV Infection

DEPRESCRIBING GUIDANCE

Antiplatelet & Anticoagulant Medications

DEPRESCRIBING GUIDANCE

Background[1-4]

Human immunodeficiency virus (HIV) infection is treated with a combination of antiretroviral medications (ARVs) to suppress replication of the virus. Treatment with ARVs is lifelong and medication effectiveness is monitored by measuring HIV viral load in the blood. ARVs prevent damage to the immune system, decrease viral load, and allow an already damaged immune system a chance to recover. For people with certain levels of immunosuppression (estimated by CD4 counts), additional medications (most commonly antibiotics) may be taken to prevent opportunistic infections (OIs).

With advances in HIV treatment, people who take their ARVs consistently, maintaining vial suppression, have a similar life-expectancy to people without HIV. Compared with the general population, people with HIV have higher risk of age-related comorbidities – hypertension, diabetes, kidney disease, and heart failure. Other comorbidities include chronic pain, malignancies, and HIV-associated neurocognitive disease, hepatitis B, hepatitis C, substance use disorders, and complex psychosocial and mental health conditions.

Antiretroviral Medications For HIV Infection[5]		
Single tablet regimens: these formulations make up a **complete** antiretroviral regimen		
Atripla (efavirenz + tenofovir disoproxil + emtricitabine)	**Dovato** (dolutegravir + lamivudine)	**Stribild** (elvitegravir + cobicistat + tenofovir disoproxil + emtricitabine)
Biktarvy (bictegravir + tenofovir alafenamide + emtricitabine)	**Genvoya** (elvitegravir + cobicistat + tenofovir alafenamide + emtricitabine)	**Symtuza** (darunavir + cobicistat + tenofovir alafenamide + emtricitabine)
Complera (rilpivirine + tenofovir disoproxil + emtricitabine)	**Juluca** (dolutegravir + rilpivirine)	**Triumeq** (dolutegravir + abacavir + emtricitabine)
Delstrigo (doravirine + tenofovir disoproxil + lamivudine)	**Odefsey** (rilpivirine + tenofovir alafenamide + emtricitabine)	
Medications used in combination: these formulations are **always used in combination** with other antiretroviral agents		
Cimduo or **Temixys** (tenofovir disoproxil + lamivudine)	**Isentress** and **Isentress HD** (raltegravir)	**Tivicay** (dolutegravir)
Descovy (tenofovir alafenamide + emtricitabine)	**Prezcobix** (darunavir + cobicistat)	**Truvada** (tenofovir disoproxil + emtricitabine)
Epzicom (abacavir + lamivudine)	**Prezista** (darunavir) boosted with **Norvir** (ritonavir) or **Tybost** (cobicistat)	
Evotaz (atazanavir + cobicistat)	**Reyataz** (atazanavir) boosted with **Norvir** (ritonavir) or **Tybost** (cobicistat)	

Why Deprescribe?

First, consider the patient's goals of care and indications for ARV use.

- **HIV Treatment** – Involve the patient in shared decision-making regarding ongoing ARV therapy. Patients living with HIV will likely have been counseled throughout the course of their infection that adherence to their ARV regimen is extremely important and that they should never stop taking their medications. Because of this, patients may be resistant or hesitant to stop taking ARVs, even at the end of life. Understand the patient's goals of care and discuss how these may have shifted as they enter hospice care.
- **HIV PrEP** - For patients taking HIV pre-exposure prophylaxis (PrEP) with tenofovir alafenamide/emtricitabine (Descovy), tenofovir disoproxil/emtricitabine (Truvada), or cabotegravir (Apretude, Vocabria), encourage discussion about ongoing risk of exposure to HIV (e.g., sexual partner living with HIV or patient sexually active with partners of unknown HIV status). Discuss goals of care and ability to continue with required HIV testing and lab monitoring for PrEP use.

Considerations For Discontinuing Antiretroviral Medications

What is the patient's expected prognosis?

- The course of the patient's HIV infection gives important context to the ongoing role of ARV therapy at end of life.
- If known, the following information is helpful to consider: recent CD4 count & HIV viral load, history of OIs / current OIs, known comorbid conditions, length of time on ARVs, history of ARV therapy.
- If a short prognosis (<1 month) is likely, discontinuation of ARV is reasonable. If prognosis is longer, or uncertain, continuing ARV may be more appropriate.

How is the patient tolerating ARVs?

- Currently used ARV regimens are usually very well-tolerated compared to older regimens, but side effects may still be problematic for some patients. Some of the most common symptoms associated with ARVs are nausea, diarrhea, and headache. ARV related toxicities may include renal dysfunction, liver toxicity, osteopenia, and metabolic disturbances.[1-4]
- Complex ARV regimens with a high pill burden may be psychologically distressing to some patients. Some patients may prefer to stop taking ARVs to alleviate this distress.
- For patients who are having intolerable side effects or toxicities related to ARVs, consider stopping ARV therapy.

What is the patient's swallowing status?

- Limited data supports crushing ARVs. Absorption and effectiveness after crushing is unclear.5,6 Most ARVs are NOT available in liquid or injectable formulations, so changing dosage formulation or route of administration are unlikely to be viable alternatives.
- ARVs containing abacavir are considered hazardous drugs (NIOSH Group 2) and requires safe handling. See medications charts in this document, follow handling and disposal instructions, and do not crush tablets with abacavir.[5]
- For patients who are no longer able to swallow medications, consider stopping ARV therapy.

Considerations For Discontinuing Antiretroviral Medications
What is the patient's clinical status?

Primary hospice diagnosis is HIV/AIDS, presence of AIDS-related conditions, CD4 count less than 200 cells/µL, or uncontrolled viral load

- Monitor for and manage common symptoms including fatigue, pain, nausea, diarrhea, weight loss, anxiety, depression, insomnia, and symptoms related to OIs.
- Identify patient's preferences for taking OI prophylaxis and/or receiving treatment if an OI is identified. Discuss patient's goals of care related to opportunistic infections and their current risk level based on recent CD4 counts.
- ARVs are likely of limited benefit at late stage and may no longer be effective, consider stopping ARV therapy.
- For patients with a short prognosis (<1 month) consider stopping ARV therapy.

Primary hospice diagnosis is not HIV/AIDS, patient is stable on ARV regimen, CD4 counts above 200 cells/µL, suppressed viral load

- Continuation of ARVs for patients who are maintained on a stable regimen and tolerating their regimen may be appropriate to prevent development of symptoms associated with uncontrolled viral replication and OIs.
- The presence of HIV infection as a comorbid condition (even when controlled) may worsen the course of other diseases (e.g., liver disease, renal disease, cardiac disease, neurocognitive disorders) and is related to overall patient decline.
- For patients with a short prognosis (<1 month) consider stopping ARV therapy. However, discontinuing ARVs in a virologically suppressed patient, dying from a condition besides AIDS, will lead to uncontrolled viremia, which could contribute to end-of-life symptom burden.[1]

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers.[7] The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

- Acknowledge the family's concerns about discontinuing medications for HIV/AIDS. Use language that allows the family time to process the discussion while encouraging continued thought and a return to the conversation at a future visit.
- Adverse drug events, bothersome side effects, and transitions in location of care require a more direct discussion and medication profile review. These are good opportunities to discuss discontinuing medications to reduce pill burden and preserve quality of life.
- Bring the family into a shared decision-making process by developing the plan of care with them. Ask them about their expectations for ARVs, what they have noted as far as benefit or side effects and recognize the support and care they have provided for months and years prior to the start of hospice care.

- "We understand this can be stressful and you may have fears, worries, or feel guilty stopping these medications. If you're not ready right now, let's plan to talk about it again later."
- "Our goal is to provide comfort, but your mom's Atripla seems to be causing her more problems now and her ability to recognize her family and her agitation seems to be getting worse lately. Are you noticing this too?"
- "While on the Biktarvy your brother's disease has gotten worse. We think the medication has provided all the benefit it can. In other words, the Biktarvy did its job, and he was able to live well for a long time. Recently, he hasn't been able to take it as prescribed, is having trouble swallowing, and has developed repeated opportunistic infections."
- "If Ben's condition improves, we can re-assess and restart the Stribild or another ARV option."

How to Deprescribe

Once the decision has been made to discontinue ARVs, they may be stopped without a taper. ARV regimen simplification may be considered as an alternative to complete deprescribing of ARV. Clinical criteria on how to deprescribe ARV are non-existent. Patient and caregivers should be fully informed of the potential risks and benefits of stopping ARVs.[8,9]

ARV REGIMEN SIMPLIFICATION[8,9]

Review each ARV drug in the context of comorbidity, physical, cognitive, and social functioning, quality of life, patient-related outcomes, and preferences.

- Reduce patient's overall pill burden to reduce polypharmacy, potentially inappropriate medication use, and drug-drug interactions
- Reduce number of ARV drugs to a 1 or 2 tablet regimen
- Consider moving to long-acting (once daily) therapy as long as the patient can swallow intact tablets

WHAT TO EXPECT WHEN STOPPING ARVS[1,8-13]

Development of acute retroviral syndrome

- When ARVs are stopped, the virus will begin to replicate, and HIV viral load will increase.
- Some patients may experience a rebound viral syndrome 2-4 weeks after stopping ARVs.
- Symptoms such as fever, fatigue, headache, pharyngitis, lymphadenopathy, diarrhea, myalgias, rash, or weight loss can be expected.
- Discuss the possibility with the patient and manage these symptoms using medications targeted to the specific symptoms the patient experiences after stopping ARVs.

Decreased immunity

- Depending on their level of immunosuppression, patients may be at risk for or begin to show symptoms associated with OIs.[9]
- Identify appropriateness and alignment with the patient's goals of care when considering use of antimicrobials for OI prophylaxis or treatment.

- OIs can include candidiasis, Pneumocystis pneumonia, mycobacterial diseases (e.g., tuberculosis, Mycobacterium avium complex), toxoplasmosis.
- Symptoms of OIs vary based on which condition is present. Common symptoms may include diarrhea, cough, weight loss, fatigue, fever, headaches.

Hepatitis flare

- Patients with hepatitis B co-infection may be taking medications that suppress both HIV and hepatitis B (e.g., tenofovir formulations, lamivudine, emtricitabine).
- Stopping these medications can lead to a relapse of hepatitis B, including symptomatic liver decompensation and possible liver failure. This may be less of a concern for patient with a short prognosis (e.g., < 2 weeks).[9-11]
- Monitor for abdominal pain, nausea, vomiting, jaundice, and encephalopathy.
- ARVs may interact with medications (such as those to treat pain) commonly used in hospice care. Medication dose adjustments may be required when ARVs are stopped.[4] Consult with a pharmacist to review medication profile and discuss medication changes to consider.
- If a decision is made to stop ARV therapy in the hospice setting, the regimen can be stopped all at once and does not need to be tapered.

A NOTE ON REGIMEN SUBSTITUTIONS

- ARV regimens are selected by considering multiple factors including, but not limited to, viral resistance, baseline viral load, presence of OIs, success or failure of prior ARV regimens, side effects or intolerance to prior ARV regimens, drug interactions, genotypic testing, pill burden, and patient preference.
- Substitutions to alternative ARV regimens are not recommended unless done in conjunction with a provider specializing in HIV care and would not typically be part of the plan of care at end of life for people living with HIV.

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Disclaimer

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National Alliance for Care at Home

Dementia Medications

DEPRESCRIBING GUIDANCE

Dementia Medications

DEPRESCRIBING GUIDANCE

Background

The role of medications (Table 1) such as acetylcholinesterase inhibitors (AChEI) and memantine in end-stage dementia has been somewhat controversial for more than a decade. In a 2009 survey of hospice medical directors, 80% recommended deprescribing them, but a minority felt there was continued benefit.[1] Clinical guidelines and medical texts have since evolved to consider deprescribing these drugs, but there is still no universal consensus.[2-3] Even when clinicians determine that deprescribing is warranted, they may encounter significant resistance from family and caregivers who commonly report negative feelings and apprehension about the process.[1,4] Additionally, in recent years, three anti-amyloid monoclonal antibodies (AA-mab) were FDA-approved to treat Alzheimer disease in patients with mild cognitive impairment or mild dementia with confirmed amyloid beta pathology – aducanumab, donanemab, and lecanemab.[5,6]

TABLE 1 – DEMENTIA MEDICATIONS

Acetylcholinesterase inhibitors (AChEI)	NMDA receptor antagonist	Combination products	
donepezil (Aricept, Adlarity) **rivastigmine** (Exelon) **galantamine** (Razadyne)	memantine (Namenda)	memantine and donepezil (Namzaric)	
	Anti-amyloid monoclonal antibodies (AA-mab)		
	aducanumab (Aduhelm)	**donanemab** (Kisunla)	**lecanemab** (Leqembi)

Why Deprescribe?

Clinical practice guidelines are a primary way in which providers practice evidence-based medicine. A systematic review found that more than two-thirds of guidelines advised AChEI deprescribing under certain conditions.[7] Guidelines that recommend deprescribing and their rationale for doing so are listed in Table 2.[7]

TABLE 2 – GUIDELINE-CITED REASONS FOR ACHEI DEPRESCRIBING[7]

☐	**Lack of Response / Loss of Effectiveness** – can be difficult to gauge, so ask the caregiver and/or original prescriber questions like "When the drug was started, do you feel like it helped?" or "Do you feel like the drug is still helping?"
☐	**Adverse Effects** – generally due to AChEI-induced excess cholinergic activity; includes diarrhea, nausea/vomiting, bradycardia, bronchospasm, incontinence, weight loss, peptic ulcer disease. Deprescribe AChEI if adverse effects are intolerable.
☐	**Severity of Cognitive / Functional Impairment** – e.g., Mini Mental State Examination score < 10 or Functional Assessment Staging (FAST) score worse than 7A

TABLE 2 – GUIDELINE-CITED REASONS FOR ACHEI DEPRESCRIBING[7]	
☐	**Institutionalization** – primary goal is to delay institutionalization; consider deprescribing once patient is residing in a facility
☐	**Medical Status** – e.g., terminally ill, actively dying, new fracture, infection
☐	**Family / Caregiver / Patient Preference** – always deprescribe AChEI if this group agrees to do so

Guideline Sponsoring Organization (Year) & Rationale for Deprescribing						
American Academy of Family Physicians (2011)	✔					
American Geriatric Society (2014)	✔					✔
British Association for Psychopharmacology (2017)					✔	
British Psychological Society & Royal College of Psychiatrists (2007)	✔		✔			
Canadian Consensus Conference on the Diagnosis and Treatment of Dementia (2020)	✔	✔	✔		✔	✔
California Workgroup on Guidelines for Alzheimer's Disease Management (2011)					✔	
Singapore Ministry of Health (2013)	✔					✔
National Institute for Health and Care Excellence (2018)	✔		✔			
Primary Health Tasmania (2023)	✔	✔		✔		
World Federation of Societies of Biological Psychiatry (2011)		✔				✔

Complete Table 2 Guidelines citations under References & Additional Resources

ADDITIONAL REASONS TO DEPRESCRIBE ACHEI INCLUDE:

- **Drug-drug / drug-disease interactions** – AChEI are pro-cholinergic and may blunt the intended effects of anticholinergic medications [e.g., ipratropium (Atrovent), glycopyrrolate (Robinul), tiotropium (Spiriva)]. AChEI prescribing information warns against use in patients with medical conditions like bradyarrhythmia, lung disease, and peptic ulcer disease.
- **Inconsistent adherence** – discontinue AChEI in patients who are unable or unwilling to take regularly.
- **Dysphagia** – Loss of swallowing ability should prompt a deprescribing discussion before switching routes of administration (e.g., oral tablets to transdermal patches), crushing tablets, or changing to liquid formulations or rectal administration. Proactive deprescribing with a planned taper may help avoid withdrawal symptoms in the future (see How to Deprescribe below).

Like AChEI, memantine is a candidate for deprescribing. While patients receiving memantine are less likely to discontinue due to problematic side effects compared to AChEI, a recent meta-analysis determined memantine to have limited effectiveness for dementia symptoms.[8] Memantine is not effective in moderate to severe dementia[9] and the Screening Tool of Older Persons Prescriptions in Frail adults with limited life expectancy (STOPPFrail) recommends a trial of deprescribing in patients with moderate-severe dementia who are frail or have a limited life expectancy.[3]

ANTI-AMYLOID MONOCLONAL ANTIBODIES: ADUCANUMAB, DONANEMAB, AND LECANEMAB[5,6]

The AA-mab infusions are not appropriate for patients with end stage dementia, or patients whose dementia continues to progress during mab therapy. However, some patients may enter hospice with other primary terminal diagnoses and will need to make treatment decisions about continuing AA-mab for comorbid mild cognitive impairment or mild dementia. There is no guidance for duration of therapy of any of the AA-mab. However, patients must be able to tolerate infusions every few weeks, ongoing monitoring of amyloid status (lumbar puncture or PET scan), periodic brain MRI to assess for amyloid-related imaging abnormalities (ARIA), and significant adverse effects (e.g., nausea, diarrhea, rash, cough, headache, hemosiderosis, infusion-related reactions). Burdensome treatments with limited to no benefit should be discontinued. Include patients and caregivers in shared decision-making using the talking points below.

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers. The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.[10]

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

- Acknowledge the family's concerns about discontinuing medications for dementia. Use language that allows the family time to process the discussion while encouraging continued thought and a return to the conversation at a future visit.
- Adverse drug events, bothersome side effects, and transitions in location of care require a more direct discussion and medication profile review. These are good opportunities to discuss discontinuing medications to reduce pill burden and preserve quality of life.
- Bring the family into a shared decision-making process by developing the plan of care with them. Ask them about their expectations for the dementia medications, what they have noted as far as benefit or side effects and recognize the support and care they have provided for months and years prior to the start of hospice care.

- "We understand this can be stressful and you may have fears, worries, or feel guilty stopping these medications. If you're not ready right now, let's plan to talk about it again later."
- "Stopping the drugs can be done on a trial basis ("drug holiday"). The hospice team will carefully monitor the process and collaborate with the facility staff. If we see any concerns, we can always pause the taper or restart the Exelon."
- "Our goal is to provide comfort, but your mom's Aricept seems to be causing her more problems now and her ability to recognize her family and her agitation seems to be getting worse lately. Are you noticing this too?"
- "While on the Namzaric for dementia your father's dementia has gotten worse. We think the medication has provided all the benefit it can. In other words, the Namzaric did its job and he was able to stay home a few more months before moving to long-term care."

How to Deprescribe

Deprescribing guidelines typically recommend a tapered discontinuation, when possible, to reduce risk of withdrawal symptoms that may occur after abrupt withdrawal. Tapering schedules of up to 50% per week over 2-4 weeks have been proposed, especially after long-term use. When the dose has tapered to the patient's starting dose, the AChEI or memantine can be discontinued.[2,11-13]

AChEI discontinuation syndromes have been reported but usually in patients with mild to moderate dementia.[2,11,14-17] Deprescribing AChEI was not associated with worsening of behaviors or an increase in antipsychotic prescribing.[17] Dementia's effects on individual patients are inherently unpredictable; changes following discontinuation may not be related to deprescribing. Case reports of clinical deterioration describe changes following discontinuation. A meta- analysis found the rate of cognitive decline to occur in the 6 weeks following discontinuation.[2] Patients with baseline psychosis may be more prone to decline.[11] Ismail et al recommend not deprescribing medications for dementia in patients with current significant psychotic symptoms, agitation or aggressive behaviors until the symptoms have stabilized, unless these symptoms worsened after initiation or a dose increase of AChEI.[13] New onset of agitation, anxiety, delirium, tearfulness, mood changes, insomnia, or paralytic ileus that are reasonably attributed to AChEI withdrawal should prompt an evaluation that considers AChEI reintroduction, or if a AChEI taper is still in progress, to taper at a slower rate.[13-16]

References & Additional Resources

ADDITIONAL RESOURCES

- Deprescribing.org – Cholinesterase Inhibitor (ChEI) and Memantine Deprescribing Algorithm https://cdpc.sydney.edu.au/wp-content/uploads/2019/06/algorithm-for-deprescribing.pdf
- PHN Tasmania – A Guide to Deprescribing Cholinesterase Inhibitors https://www.primaryhealthtas.com.au/wp-content/uploads/2023/03/A-guide-to-deprescribing-cholinesterase-inhibitors.pdf

TABLE 2 GUIDELINES

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National Alliance for Care at Home

Inhalers

DEPRESCRIBING GUIDANCE

Inhalers

DEPRESCRIBING GUIDANCE

Pulmonary Background

More than 8 out of 10 patients with obstructive lung disease in the U.S. experience inhaler device use-related errors.[1] In patients with end-stage pulmonary disease or advanced age, the risk of use-related errors is likely far greater.[2] Incorrect inhaler technique prevents patients from receiving optimal benefit from their inhalers. Many of the common step-by-step use errors are preventable by replacing the inhaler with nebulized therapy or an oral dosage formulation.1 Nebulized medications tend to be a more efficient route of administration for patients with end-stage disease when compared to metered-dose or dry-powder inhalers (MDI or DPI). Switching inhaled corticosteroids to oral corticosteroids may provide palliation of additional symptoms including suppressed appetite, inflammatory pain, fatigue, and acute pulmonary exacerbations.[3]

Why Deprescribe?

Risks Associated With Inhaler Device Continuation		
Lack of Benefit / Increased Risk	Improper inhaler technique may jeopardize adequate medication delivery resulting in poorer outcomes over time including greater risk of exacerbations, greater health resource utilization, and mortality.[1]	
Therapeutic Duplications / Polypharmacy	Lack of benefit from improper inhaler technique may lead to the prescribing of additional agents in an attempt to manage uncontrolled symptoms[4] resulting in increased overall medication exposure from duplicative therapies (e.g. long-acting bronchodilators + scheduled short-acting bronchodilators, inhaled corticosteroids + oral corticosteroids).	
Adverse Effects from Overexposure and/or Incorrect Use[5]	**Beta2-agonists*** - anxiety, tachycardia, tremor **Anticholinergics*** - dry mouth, urinary retention **Inhaled corticosteroids*** - oral thrush, pharyngitis	**Take Note:** Adverse effect risk increases without additional clinical benefit with overuse and/or use of multiple agents in the same therapeutic class

*See provided list of Common Inhaled Respiratory Medications for specific product examples within each therapeutic class.

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers.[6] The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

Many patients are resistant to changing long-term medication regimens. Recognize that discussion on replacing inhalers may be interpreted by patients and families that the provider is "giving up", abandoning the patient, and might suggest that death is imminent. Use positive language and offer options; this shared decision-making approach may increase chances of successful deprescribing or conversion to more appropriate medication(s).

- "Can you show me how you are using your inhalers? It's okay if you don't remember, we can review the steps together."
- "It seems you are having some difficulty using your inhalers. As your disease progresses it may be useful to make some adjustments to your medications. What worked before may not work as well for you now. Would you like to talk about making your medication routine a little less complicated?"
- "There are other medications for shortness of breath/anxiety that may be more effective than your current inhalers."
- "It sounds like it's hard for you to make a decision about stopping your inhaler. Can I share what my experiences and observations have been?"
- "We too want your breathing to be more comfortable. I want you to know this is a team effort and you're in charge of the team. I appreciate you allowing me to talk with you today."
- "Before I visit next week, I'll give your doctor an update and get her input. She might suggest stopping the inhalers and using a nebulizer. Are you willing to give it a try?"
- To the prescriber: "I have observed the patient who is unable to properly use the inhalers her anymore. I believe switching to a less complicated delivery system may greatly improve her outcomes. Are you okay with me making this change?"

How to Deprescribe

GOAL: Discontinue ineffective inhalers and reduce adverse effects while maintaining symptom control. Refer to the following approaches for pulmonary deprescribing guidance.

Most end-stage obstructive lung disease inhaler regimens can be consolidated to a nebulized short-acting beta-2 agonist / anticholinergic plus an oral corticosteroid (e.g., albuterol/ipratropium nebulized QID + prednisone by mouth QAM) supplemented with palliative measures for dyspnea management and various non-pharmacological techniques.

If any of the following are present, consider deprescribing or replacing an inhaler device with an appropriate medication(s) in the same therapeutic class		
☐	**Lack of Breathing Coordination**	Inability to coordinate actuation of the inhaler device with a deep inhalation.
☐	**Lack of Inspiratory Capacity**	Inability to deeply and forcibly inhale the medication to deliver it to the site of action deep into the lungs and hold breath for at least 5-10 seconds.
☐	**Lack of Physical Aptitude**	Inability to actuate inhaler due to lack of dexterity and grip strength (e.g., severe arthritis in the hands).
☐	**Lack of Cognitive Aptitude**	Patients with cognitive impairment (e.g., dementia) might not recall the proper step-by-step procedure for using an inhaler device.
☐	**Inhaler Inhalation Technique Errors Despite Continued Education**	Review patient's ability to follow and perform device-specific step-by-step directions during all routine assessments (e.g., admission/recertification, decline in status, before ordering any refills, change in location).
☐	**Presence of Adverse Effects from Overexposure and/or Incorrect Use**	Consolidate duplicative therapies in favor of less complicated delivery systems (see "Eliminate Therapeutic Duplications / Polypharmacy" algorithm).

Eliminate therapeutic duplications / polypharmacy

Step 1
Does the patient have>1 inhaled **beta$_2$1agonist**?

NO →

Step 2
Does the patient have>1 inhaled **anticholinergic**?

NO →

Step 3
Does the patient have>1 **corticosteroid** source?

YES ↓

Replace multiple beta$_2$-agonist sources with short-acting beta$_2$-agonist nebulizer solution*

<u>If previous therapy was scheduled:</u> Use every 6 hours schedules
or
<u>If previous therapy was PRN:</u> Use every 4–6 hours
Continue to step 2

YES ↓

Replace multiple anticholinergic sources with short-acting anticholinergic nebulizer solution*

<u>If previous therapy was scheduled:</u> Use every 6 hours schedules
or
<u>If previous therapy was PRN:</u> Use every 6–8 hours
Continue to step 3

YES ↓

Optimize oral steroid therapy (unless comorbidity precludes use) and discontinue duplicate therapies.

*Combination ipratropium/albuterol solution (DuoNeb) can be used in lieu of the individual components to minimize nebulization time.

Addressing other non-steroid oral pulmonary medications
If the patient is also using any non-steroid oral pulmonary medications consider discontinuing if no longer clinically appropriate in end-of-life care or in advanced age (e.g. albuterol tabs, theophylline), or if a potential therapeutic duplication of therapy exists (e.g., montelukast or roflumilast with an oral corticosteroid).

Consider other dyspnea management techniques as appropriate	
Non-Pharmacological Management	• Minimize trigger risk, positioning sitting up, optimize environment by keeping room cool with lower humidity, increasing air movement with a fan, bedside relaxation techniques, provider psychosocial and spiritual support, smoking cessation, oxygen therapy[3]
Palliative Dyspnea Management[3]	• Short-acting opioids: low-dose morphine every 2 hours PRN for dyspnea • Benzodiazepines: low-dose lorazepam every 4 hours PRN for dyspnea-associated anxiety • Other nebulized agents can be utilized for refractory dyspnea (e.g. nebulized fentanyl or morphine) and associated congestion (e.g. nebulized furosemide or saline nebulization solution for inhalation). ▫ Preservative-free intravenous solution should be administered via nebulizer and the dose/frequency closely monitored for adjustment, as needed. ▫ Evidence is scant to support utilizing these therapies. Routes of administration resulting in consistent, therapeutic blood levels should be considered first-line therapy. Individualized patient decisions should be aligned with symptom severity and patient goals of care.

Common Inhaled Respiratory Medications[5]				
Generic Name	**Brand Name(s)**	**Dosage Form**	**Strength (Doses per Device)**	**Typical Dose**
Short-Acting Beta2 Agonists (SABA) - Relax airway smooth muscle (bronchodilation) by stimulating beta2 receptors				
Albuterol	Ventolin HFA, ProAir HFA, Proventil HFA, Accuneb	MDI Nebulizer	90 mcg per actuation (200)	MDI: 2 inh QID Neb: 3 mL via neb QID
Levalbuterol	Xopenex HFA, Xopenex	MDI Nebulizer	45 mcg per actuation (200)	MDI: 2 inh QID Neb: 3 mL via neb QID
Long-Acting Beta2 Agonists (LABA) - Relax airway smooth muscle (bronchodilation) by stimulating beta2 receptors				
Indicaterol	Arcapta Neohaler	DPI	75 mcg per capsule (30)	1 cap inh Daily
Salmeterol	Serevent Diskus	DPI	50 mcg per blister (60)	1 inh BID
Olodaterol	Striverdi Respimat	MDI	2.5 mcg per actuation (28, 60)	2 inh Daily

Generic Name	Brand Name(s)	Dosage Form	Strength (Doses per Device)	Typical Dose
Arfomoterol	Brovana	Nebulization	15 mcg per 2 mL	2 mL via neb BID
Formoterol	Perforomist	Nebulization	20 mcg per 2 mL	2 mL via neb BID
Short-Acting Muscarinic Antagonists (SAMA) - Provide bronchodilation by inhibiting acetylcholine at parasympathetic sites in bronchial smooth muscle				
Ipratropium	Atrovent	MDI Nebulization	MDI: 17 mcg per spray (200) Neb: 0.5 mg per 2.5 mL	MDI: 2 inh QID Neb: 2.5 mL via neb QID
Long-Acting Muscarinic Antagonists (LAMA) - Provide bronchodilation by inhibiting acetylcholine at type 3 muscarinic (M3) receptors				
Aclidinium	Turdoza Pressair	DPI	400 mcg per actuation (60)	1 inh BID
Tiotropium	Spiriva HandiHaler	DPI	18 mcg per capsule (30)	1 cap inh Daily
Tiotropium	Spiriva Respimat	MDI	1.25, 2.5 mcg per actuation (28, 60)	2 inh Daily
Umeclidinium	Incruse Ellipta	DPI	62.5 mcg per actuation (30)	1 inh Daily
Glycopyrrolate	Seebri Neohaler Lonhala Magnair	DPI Nebulization	DPI: 15.6 mcg per actuation (60) Neb: 25 mcg per 1 mL	DPI: 1 cap inh BID Neb: 25mcg via neb BID
Revefenacin	Yupleri	Nebulization	175 mcg per 3 mL	3 mL via neb Daily
Inhaled Corticosteroids (ICSs) - Control inflammation with slightly varying mechanisms - most work by decreasing leukocyte migration and capillary permeability while increasing cellular lysosomal stabilization				
Beclomethasone	Qvar	MDI	40, 80 mcg per spray (120)	80 mcg inh BID
Budesonide	Pulmicort Flexhaler	DPI	90, 180 mcg per actuation (120)	180 mcg inh BID
Ciclesonide	Alvesco	MDI	80, 160 mcg per spray (60)	80 mcg 1 inh BID
Fluticasone	Flovent HFA	MDI	44, 110, 220 mcg per spray (120)	220 mcg 1 inh BID
	Flovent Diskus	DPI	50, 100, 250 mcg per actuation (60)	250 mcg inh BID
Budesonide	Pulmicort Respules	Nebulization	0.25, 0.5, 1 mg per 2 mL	0.5 mg/2 mL via neb BID
Mometasone	Asmanex Twisthaler	DPI	110, 220 mcg per actuation (14, 30, 60, 120)	220 mcg inh BID

Generic Name	Brand Name(s)	Dosage Form	Strength (Doses per Device)	Typical Dose
Combination Therapies - Combines two or more medications with different mechanisms of action (found above)				
SAMA/SABA Combinations				
Ipratropium-Albuterol	Combivent Respimat DuoNeb	MDI Nebulization	MDI: 12/120 mcg per spray (120) Neb: 0.5 mg/2.5 mg per 3 mL	MDI: 1 inh QID Neb: 3 mL via nebulizer QID
ICS/LABA Combinations				
Budesonide-Formoterol	Symbicort	DPI	80/4.5, 160/4.5 mcg per actuation (120)	160/4.5 2 inh BID
Fluticasone-Salmeterol	Advair HFA	MDI	45/21, 115/21, 230/21 mcg per spray (120)	115/21 2 inh BID
	Advair Diskus	DPI	100/50, 250/50, 500/50 mcg per actuation (60)	250/50 1 inh BID
Fluticasone-Vilanterol	Breo Ellipta	DPI	100/25 mcg per actuation (30)	1 inh Daily
Mometasone-Formoterol	Dulera	MDI	100/5, 200/5 mcg per spray (120)	100/5 2 inh BID
LAMA/LABA Combinations				
Umeclidinium-Vilanterol	Anoro Ellipta	DPI	62.5/25 mcg per actuation (30)	1 inh Daily
Tiotropium-Olodaterol	Stiolto Respimat	MDI	2.5/2.5 mcg per actuation (60)	2 inh Daily
Glycopyrrolate-Formoterol	Bevespi Aerosphere	MDI	9/4.8 mcg per actuation (120)	2 inh BID
Glycopyrrolate-Indacaterol	Utibron Neohaler	DPI	15.6/27.5 mcg per capsule (60)	1 cap inh BID
ICS/LAMA/LABA Combinations				
Fluticasone-Umeclidinium-Vilanterol	Trelegy	DPI	100/62.5/25 mcg per actuation (14, 30)	1 inh Daily

MDI: metered dose inhaler DPI: dry powder inhaler inh: inhalation

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National Alliance for Care at Home

Proton Pump Inhibitors

DEPRESCRIBING GUIDANCE

Proton Pump Inhibitors

DEPRESCRIBING GUIDANCE

Background

Proton pump inhibitors (PPIs) are commonly prescribed for patients in the United States; especially older adults, with 30% of Medicare Part D beneficiaries prescribed a PPI. [1] PPIs have multiple indications including: dyspepsia (indigestion), frequent heartburn, gastroesophageal reflux (GERD), H. pylori treatment, hyper secretory conditions and ulcer treatment and prophylaxis.[4] For most indications, PPIs have a short length of therapy and then discontinued upon resolution of symptoms. Despite prescribing guidelines, it is estimated that almost 50% of nursing home residents are inappropriately prescribed a PPI. [2] Available PPIs, indications and length of therapy are listed below.

TABLE 1 – PROTON PUMP INHIBITORS

Proton Pump Inhibitors		
Dexlansoprazole (Dexilant)	Esomeprazole (Nexium)	Lansoprazole (Prevacid, Prevacid SoluTab)
Omeprazole (Prilosec, Prilosec OTC)	Pantoprazole (Protonix)	Rabeprazole (Aciphex)

TABLE 2- SHORT-TERM THERAPY OF PPIS[22]

Short-Term Therapy of PPIs[22]		
Indication	**Length of Treatment**	• **Comments**
H. pylori infection	10-14 days	• PPI + antibiotic (e.g., amoxicillin, clarithromycin, metronidazole).
Frequent heartburn	2 weeks	• OTC labeling; avoid chronic patient self-treatment.
Dyspepsia	4-8 weeks	• Symptoms include nausea, bloating, discomfort not reflux.
NSAID-induced ulcer	4-8 weeks	• Maintenance therapy may be needed after ulcer heals.
Active peptic ulcer disease	4-8 weeks	• Maintenance therapy may be needed after ulcer heals.
GERD	8 weeks	• Failure of PPI often related to poor adherence to therapy.

Long-Term Therapy of PPIs[22]		
Indication	**Patient Parameter**	• **Comments**
NSAID therapy, chronic	NSAID required + age > 65 years NSAID high dose chronic therapy, any age NSAID ± ASA ± oral CS ± anticoagulants NSAID required + past history of ulcers	• Consider risk vs benefit of changing to a more COX-2 selective NSAID (celecoxib). • Benefit of COX-2 therapy lost if concomitant aspirin. • High dose H2RA therapy may be equally effective.
GERD + comorbid condition	GERD symptoms continue/return after PPI discontinued Erosive esophagitis Barrett's esophagus	• Optimize PPI; ensure adherence and appropriate dosing. • Most PPIs effective when taken daily before breakfast.
Hyper secretory condition	Zollinger-Ellison Syndrome Gastric outlet obstruction	• May require chronic, high-dose PPI therapy • Therapeutic substitution may not be accepted
Idiopathic ulcer history	Bleeding ulcer with no NSAID use and H. pylori negative	• High risk of recurrent ulcer bleeding. • Chronic PPI therapy is recommended.

COX=cyclooxygenase inhibitors, CS=corticosteroid, NSAID=non-steroidal anti-inflammatory, PMH= past medical history, H2RA= histamine2 receptor antagonist

Why Deprescribe?

Although PPIs are safe and effective when used appropriately, the overuse of PPIs is associated with multiple adverse events and an increased risk of infection (i.e. community-acquired pneumonia (CAP) and C. difficile) and hip fractures. These risks increase with longer duration of therapy and higher doses of PPI medications.[8,17,18] Patients receiving hospice care, especially the elderly, may be immunocompromised and have age-related reduction in gastric acid secretion increasing the associated PPI risks. Acid suppression treatment with the lowest effective dose should only occur when necessary to manage symptoms.[18]

Consider deprescribing if any of following are present:

Extended Length of Therapy	Long-term use of PPIs may lead to an increased risk of: • C. difficile infection • Community-acquired pneumonia (CAP) • Hip fracture: Continuous use of a PPI over a five year period has been correlated with increased hip fracture risk.[17] • Problematic adverse effects (see Table 3) • Poly-pharmacy • Altered absorption of medications ▫ PPIs may decrease the serum concentration of Vitamins A, D, E, K and Iron. Prolonged treatment (≥2 years) may lead to malabsorption of dietary vitamin B12 and subsequent vitamin B12 deficiency.[7]
Inappropriate or Unknown Indication	• If the patient/caregiver does not know why a PPI was started and if no formal diagnosis found in past medical history, consider discontinuing the PPI and monitor for heartburn and dyspepsia symptoms. • PPIs are not for PRN use but are appropriate when patients require ongoing acid suppression. If dyspepsia and heartburn are only occasional problems, H2RA taken once or twice daily PRN is more appropriate. • GI prophylaxis for patients who are taking corticosteroids, such as prednisone and dexamethasone, is controversial. ▫ Consider a PPI when prescribing a corticosteroid only if the patient has a significant past medical history of gastric disease. • PPIs are not standard therapy for patients receiving tube feedings. Use a PPI only if patient reports GERD symptoms. PPIs can help with symptoms of reflux but do not reduce the risk of aspiration pneumonia due to tube feedings.[14]
Transition in Care	Nearly 70% percent of intensive care unit (ICU) patients may be inappropriately prescribed a PPI upon hospital discharge.[13] Some PPI indications, such as ICU stress prophylaxis, apply only to certain care settings. When patients are discharged from ICU to less intensive care settings, PPIs can often be discontinued.
Pill Burden	Loss of swallowing ability should prompt medication review and discussion of deprescribing.
Drug Drug Interactions	**Reduce the potential for drug interactions between PPIs and medications that are commonly prescribed at end of life:** PPIs may increase the serum concentration of citalopram, leading to an increased risk for toxicity (eg, serotonin syndrome, QT prolongation). Consider limiting citalopram dose to a maximum of 20 mg/day if used with omeprazole. Esomeprazole may diminish the anti-platelet effect of clopidogrel. Esomeprazole may decrease serum concentrations of the active metabolite(s) of clopidogrel.[7]

TABLE 3 – COMMON SIDE EFFECTS OF PROTON PUMP INHIBITOR THERAPY

Common Side Effects of Proton Pump Inhibitor Therapy				
abdominal pain	diarrhea	vomiting	peripheral edema	constipation
flatulence	nausea	dry mouth	myalgia (muscle pain)	pharyngitis (sore throat)
infection	dizziness	headache	pain	arthralgia (joint pain)

Patient & Caregiver Talking Points[22]

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers. The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

- Patients are often concerned about stopping medications they may have been taking for a long time to prevent or slow disease progression. The deprescribing process is driven by available clinical evidence and clinician experience caring for patients at end of life. Discontinuing proton pump inhibitors does not affect patient prognosis or survival but provides benefit by reducing risk of drug interactions, adverse events, and problematic side effects.
- All deprescribing decisions are made in collaboration with the hospice interdisciplinary team and the patient's attending physician or other health care providers.
- Hospice and palliative care clinicians recommend deprescribing proton pump inhibitors for patients in declining health, if the patient is having trouble swallowing pills and if the expected prognosis is less than 6 months.
  - "You started the Nexium when you were in the hospital last year for the hip fracture, and you've continued to take it every day since, right? I know you'd like to take fewer medications but I don't think you want the heartburn to come back. Can we order an over the counter famotidine to have available as-needed just in case?"
  - "I agree that we can stop the vitamin D and calcium and your vitamin and fish oil capsule. I think the baby aspirin is ok to stop too. I know you want to stop the Nexium, and that's ok but sometimes stopping it quickly that can cause rebound heartburn and reflux symptoms."
  - "Ok, I'll chat with your doctor and we'll have all of these medications stopped. We'll add the as-needed famotidine for a week or so just to be sure your heartburn doesn't come back."

How to Deprescribe[3]

- With chronic therapy (greater than two months), it is recommended to discontinue PPIs by taper to prevent rebound GERD-like symptom (rebound acid hyper secretion).

- There are several strategies for deprescribing PPIs by taper schedule:[15]
  1. Taper the PPI over 2-4 weeks: Decrease the dose and then extend the dosing interval to every other day or every 3rd day.
  2. Step-down therapy: switch patient from PPI to a Histamine-2 Receptor Antagonist (H2RA) such as famotidine daily for 2-3 weeks, then taper down to PRN only.
  3. Provide antacids or H2RAs for PRN use during and after the PPI taper.

- Occasionally, the indicated condition may return after the PPI is tapered off. Restarting the PPI may be required. Suggested duration of therapy for specific indications are listed below:
  - GERD: Indefinite until patient desires reduced pill burden or can no longer swallow.[8]
  - Dyspepsia: Repeat a course of PPI therapy for 4-8 weeks.[9]

- H. pylori infection: Repeat PPI for 7-14 days.[8]
  - Ulcers: Indefinite until patient desires reduced pill burden or can no longer swallow.[9]
  - Frequent heartburn: Repeat course after 4 months; consider H2RA PRN.[7]

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National Alliance for Care at Home

Type 2 Diabetes Medicatons

DEPRESCRIBING GUIDANCE

Type 2 Diabetes Medicatons

DEPRESCRIBING GUIDANCE

Background

Type 2 diabetes (DM2) therapy traditionally focuses on intensive glycemic control, maintaining A1c < 6.5% or fasting glucose <130 mg/dL,[1] to lower the long-term risk of developing complications such as retinopathy, kidney disease, and neuropathy. At the end of life, tight glycemic control places patients at risk of hypoglycemia. Less intensive glycemic goals take into consideration limited life expectancy and reduce the risk of cognitive decline attributed to hypoglycemia.[1-6]

Why Deprescribe?

In a national sample of Veterans Affairs nursing homes, 38% of hospice patients treated with insulin experienced hypoglycemia (glucose < 70 mg/dL), and 18% hospice patients experienced a severe episode (glucose < 50 mg/dL).[6] Additionally, an upward trend in emergency room visits for hypoglycemia from 2006 to 2011 saw the highest rates among adults aged 75 years or older.[8] Hypoglycemia can cause cognitive impairment, weakness and dizziness, increasing risk of falls and fractures.[5] Engaging patients and families about managing diabetes at end-of-life helps guide expectations, maintain quality of life, and reduce reliance on emergent care. Hospice patients with diabetes[2-4]

- Experience changes in their disease, medications, and diet that affect glucose levels
- Might not show signs of hyperglycemia but will experience symptoms of hypoglycemia
- May no longer want to inject insulin or monitor their glucose frequently enough to use insulin safely

Individualize the approach to blood glucose monitoring; do not test HbA1c and reduce frequency of fingerstick monitoring to the minimum required for clinical indications or discontinue it altogether and only check if patient is exhibiting signs/symptoms of hypo- or hyperglycemia. If blood glucose testing is included in the care plan, use when adjusting therapy and based on symptoms, not merely for documentation.[9-10]

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers.[11] The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

Educate patients and caregivers about how change in condition affects treatment and the risks of continuing tight glycemic control. Provide information on the signs and symptoms of both hyper- and hypoglycemia, especially when considering changes to diabetic medications and glucose testing. Patients may have only one sign or symptom, requiring vigilance from both the caregiver and clinician:

- **Hyperglycemia:** Frequent urination, thirst, hunger, anxiety, confusion, irritability, headache, blurry vision, trouble concentrating, numbness, tingling, recurrent infections, impaired wound healing10Hypoglycemia: Headache, confusion, dizziness, personality changes, fatigue, weakness, tiredness, sweating, shakiness, anxiety, elevated heart rate[10]

Many patients have a difficult time accepting that the monitoring and medication regimen can be liberalized after years of hearing about the importance of monitoring and strict glycemic control. Diabetes management may provide a sense of agency at a time when patients are losing control and independence.

Recognize that discussion on loosening glycemic control may be interpreted by patients and families that the provider is "giving up" or abandoning the patient or might suggest that death is imminent. When indicated, and based upon patient's goals, recommend deprescribing antihyperglycemic oral medications and reducing the dose of insulin therapy to prevent hypoglycemia. Use positive language and offer options to the patient and family.[4,12]

- "We often find that people with diabetes and advanced illness might not benefit from their diabetic medication like they once did. I'm concerned that you are at risk for low blood sugars because of changes in your medications and diet. I'd like to review how to recognize and treat low blood sugar with you and your daughter."
- "I'm worried that your mom's blood sugar is running low and her eating habits are irregular. Her appetite has really dropped off lately. Let's discuss changing some of her diabetes medications."
- "It sounds like it's hard for you to consider stopping your dad's diabetes medications. Can I share what my experiences have been?"
- "How do you feel about my recommendation to stop your Glucotrol?"

How to Deprescribe

Avoiding hypoglycemia requires familiarity with the patient's daily oral intake, recognizing the hypoglycemic agents that commonly cause hypoglycemia and an understanding of the insulin's onset of action, peak (when insulin is at its highest glucose lowering effect) and duration of effect.

TABLE 1 - DIABETES MEDICATION

Class	Generic (Brand)		Hypoglycemia common?[13-15]
Sulfonylureas	• Glipizide (Glucotrol) Glimepiride (Amaryl) Glyburide (DiaBeta)	• Chlorpropamide (Diabinese) Tolbutamide (Orinase)	Yes (highest)
Meglitinides	• Nateglinide (Starlix)	• Repaglinide (Prandin)	Yes (low risk)
Biguanide*	• Metformin (Glucophage)	• Metformin XR/ER (Glucophage XR)	No
Sodium-glucose linked transporter-2 (SGLT-2) inhibitors*	• Bexagliflozin (Brenzavvy) Canagliflozin (Invokana)	• Dapagliflozin (Farxiga) Empagliflozin (Jardiance) Ertugliflozin (Steglatro)	No
Thiazolidinediones (TZDs)	• Pioglitazone (Actos)		No
Dipeptidyl peptidase-4 (DPP-4) inhibitors* (“gliptins”) (oral)	• Alogliptin (Nesina) Linagliptin (Tradjenta)	• Saxagliptin (Onglyza) Sitagliptin (Januvia)	No
Glucagon-like, peptide-1 (GLP-1) agonists or incretin mimetic	• Dulaglutide (Trulicity) Exenatide (Byetta) Exenatide ER (Bydureon) Liraglutide (Victoza) Lixisenatide (Adlyxin)	• Semaglutide (Ozempic, Rybelsus) Liraglutide-insulin degludec (Xultophy) Lixisenatide-insulin glargine (Soliqua)	No, monotherapy Yes, with insulin
Glucagon-like, peptide-1 (GLP-1) agonist & glucose-dependent insulinotropic polypeptide (GIP) agonist (“twincretin”)	• Tirzepatide (Mounjaro)		No, monotherapy Yes, with insulin
Amylin analog (injectable)	• Pramlintide (Symlin)		No, monotherapy Yes, with insulin
Alpha-glucosidase inhibitors (oral)	• Acarbose (Precose)	• Miglitol (Glyset)	No

*Medications in this class are also available as combination products, increasing risk for hypoglycemia and therapeutic duplication

Insulin Type	Products	Appropriate Candidates for Continued Insulin Use[9,13-15]
Rapid-acting	• Humalog, Ademlog (insulin lispro) • Lyumjev (insulin lispro-aabc) • NovoLog, Fiasp (insulin aspart) • Apidra (insulin glulisine)	For patients with **inconsistent eating habits** willing and capable to administer frequent injections independently or with support in home.
Short-acting (Regular)	• Human insulin (rDNA origin) (Humulin R, Novolin R)	For patients with **inconsistent oral intake** (or in whom oral intake is diminishing) and willing and capable to administer frequent injections independently or with support in home.
Intermediate-acting (NPH)	• Human (rDNA) isophane (Humulin N, Novolin N)	For patients **with a history of glucose control on rapid-acting or short-acting insulins** willing and capable to administer 2 injections per day independently or with support in home. Oral intake should be stable.
Long-acting	• Lantus (insulin glargine) • Basaglar (insulin glargine) • Toujeo (insulin glargine) • Semglee (insulin glargine-yfgn) • Levemir (insulin detemir)	**Long-acting insulins may cause less hypoglycemia as they have no significant peak effect.** For patients with a history of glucose control on rapid-, short- or intermediate-acting insulins willing and capable to administer 1 injection per day independently or with support in home. Oral intake should be stable.
Ultra long-acting	• Tresiba (insulin degludec)	**Place in therapy for hospice patients has not been established.**
Insulin mixtures	• NovoLog Mix 70/30 • Humalog Mix 75/25 & 50/50 • Humulin 70/30 • Novolin 70/30	Initiated in treatment-naïve patients. Patients on hospice may be maintained on these therapies while stable, however, it is a **rare to convert other insulin therapies into an insulin mixture regimen.**

REASONABLE TREATMENT GOALS IN HOSPICE

- Avoid hypoglycemia while minimizing symptoms of sustained hyperglycemia syndromes (below):
  - Hyperosmolar hyperglycemic state (HHS) with blood glucose >750 mg/dL
  - Diabetic ketoacidosis (DKA) with blood glucose levels >300 mg/dL (rare for T2DM)

- Simplification of complex regimens
  - Discontinue non-insulin hypoglycemic agents
  - Discontinue or simplify sliding scale insulin by using just two blood sugar reference points instead of multiple ranges (e.g., give 2 units for premeal glucose >250 mg/dl, give 4 units for premeal glucose > 350 mg/dl)[1]

- Minimize the burdens of diabetes treatment (e.g., stop A1c testing, decrease frequency of blood glucose checks and finger sticks)[10]

- When health status is complex with intermediate life expectancy, if still testing, a reasonable A1c goal is <8.0% (average blood glucose of just under 200 mg/dL). When limited remaining life expectancy makes benefit uncertain, avoid reliance on A1c and make glucose decisions based on avoiding hypoglycemia and symptomatic hyperglycemia.[1]

BLOOD GLUCOSE TARGETS

Advanced disease and relatively stable – several months to a year life expectancy

- No changes at this point unless requested by patient or family; dosing reflects goal of avoiding hypoglycemia, less intensive monitoring, and tailored to oral intake
- Regimen tailored to target fasting glucose <200 mg/dL[9,16]

Impending death (e.g., organ failure or limited oral intake) – several weeks or less life expectancy

- Adjust medication regimens to avoid hypoglycemia
- Recommend decreasing or stopping insulin and sulfonylurea medications
- If continuing insulin, liberalize therapy to maintain fasting glucose around 200 mg/dL[9,16]

Actively dying (e.g., multiple organ system failure, end of life symptoms such as agonal respirations) – life expectancy is usually hours to days: Goal is patient comfort; glycemic control is not a priority.

- **Type 1 diabetes:** Liberal target (e.g., <360 mg/dL) and insulin continued only if patient is prone to DKA
- **Type 2 diabetes:** Discontinue all oral and injectable diabetes medications and insulin[9,16]

References & Additional Resources

ADDITIONAL RESOURCES

- Deprescribing.org. Guidelines and Algorithms: Antihyperglycemic. https://deprescribing.org/resources/deprescribing-guidelines-algorithms/
- Primary Health Tasmania. A guide to deprescribing antihyperglycaemic agents. Dec 2022. https://www.primaryhealthtas.com.au/wp-content/uploads/2023/03/A-guide-to-deprescribing-antihyperglycaemics.pdf

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National Alliance for Care at Home

Statins

DEPRESCRIBING GUIDANCE

Statins

DEPRESCRIBING GUIDANCE

Background

Statins are the most effective and best tolerated medications for treating dyslipidemias.[1,2] Through systematic evidence review, statins have shown reduced cardiovascular (CV) events when used for both primary (reducing the chance of disease before it happens) and secondary prevention (slowing down the progression of illness).[1] The benefit that statins can provide to patients is clear, especially with recent guidelines that greatly expand the population of patients who may qualify for statin therapy.[1] Hyperlipidemia does not present with symptom management that would need palliation and evidence suggests that survival is not affected;[2] hyperlipidemia does not contribute to the patient's 6 month or less prognosis.[3] Even the most recognized proponent of statins for cholesterol management, the American College of Cardiology/American Heart Association Task Force, recognizes the need for shared decision- making including discussions on deprescribing statins in older adults with multimorbidity, frailty, fall risk, sarcopenia, and cognitive decline.[1]

TABLE 1 - STATINS

Statins		
Atorvastatin A,B (Lipitor, Atorvaliq)	**Lovastatin** (Altoprev)	**Rosuvastatin A** (Crestor, Ezallor Sprinkle)
Simvastatin A (FloLipid, Zocor)	**Fluvastatin** (Lescol XL)	**Pravastatin** (Pravachol)
Pitavastatin (Livalo, Zypitamag)		

A: also available in combination with ezetimibe
B: also available in combination with amlodipine

Why Deprescribe?

Optimize drug therapy to be consistent with the patient's treatment goals

Statins are preventative therapy and do not facilitate comfort or enhance quality of life.[2] Discontinue statins if the patient does not wish to pursue preventative therapies.

- At end of life, benefits of lipid-lowering medication are unlikely to outweigh risk; consider cardiovascular events, performance status and quality of life, fatigue, impact on memory, and muscle-related pain symptoms.[2]
- Reduce the burden of pharmacotherapy by discontinuing non-palliative medications.
- Improve quality of life by reducing risk of muscle problems such as aches, pains, and/or weakness. Deprescribing statins may also reduce falls, lessen memory loss, and decrease nausea, constipation, and diarrhea.[2]

- Clinical trials have shown that discontinuing statin therapy may have positive benefits for patients while not increasing risk of death. Among the outcomes, quality of life scores were higher and there were no differences in median time to death or time to first CV event between study groups.[4, 5]

ALIGN MEDICATION USE WITH THE PATIENT'S PROGNOSIS AND CONTINUED BENEFIT OF DRUG THERAPY

The purpose of taking a statin is to reduce the occurrence of major CV events in high risk patients. Compared to non-users, significant reduction of CV events does not happen until 2 or more years of therapy.[2,3] Time to benefit in primary prevention of fatal and non-fatal MI ranges from 1.9 to 5.3 years for statins.[4]

- For primary prevention, the time to benefit is estimated at 3-4 years.[2,3,6]
- For secondary prevention, some evidence shows potential benefit at 16 weeks with high-intensity doses.[2,3]
- Newly initiated statin therapy after acute stoke or TIA shows significant risk reduction after 5 years.[7]
- In a meta-analysis of primary prevention trials, researchers concluded that in elderly subjects at high CV risk without established CV disease statins do not significantly prolong survival.[8]
- Statin therapy does not appear to show benefit within a 6-month prognosis window and are considered unnecessary medications for hospice patients.[2]

MINIMIZE SIDE EFFECTS AND MAXIMIZE SAFETY OF THE MEDICATION REGIMEN BY DETERMINING IF THE PATIENT IS AT RISK OF HARM BY CONTINUING THERAPY

- Statin side effects may be dose dependent and include constipation, headache, myalgia, arthralgia, abdominal pain, diarrhea, dyspepsia, hyperglycemia, cognitive impairment, and fatigue.[9]
- Elderly patients and those near end of life experience declining organ function and altered metabolism which may explain the lack of benefit and increased risk of side effects with statin therapy.[1-4,7] Prescribe statins cautiously in patients over 65 and those with renal or hepatic impairment due to increased risk of myopathy.[9] If a patient complains of severe muscle symptoms or fatigue, discontinue the statin immediately. Very limited evidence of benefit is available for patients older than 75 years.[11]
- Loss of swallowing ability should prompt medication review and discussion of deprescribing to reduce pill burden.
- Statins, with the exception of pravastatin, are highly protein bound. Patients with malnutrition or decreased serum protein levels, are more likely to experience muscle pain as a result of statin toxicity.[1]

TABLE 2 – GUIDELINE-CITED REASONS FOR STATIN DEPRESCRIBING[9,13]

Guideline-Cited Reasons For Statin Deprescribing[9,13]	
1	**Intolerance** – cognitive dysfunction, myopathy, rhabdomyolysis, liver toxicity, liver failure, cirrhosis, heavy alcohol use. Assess for other adverse drug reactions and polypharmacy – harm outweighs benefit.
2	**Health / Medical Status** – e.g., terminally ill, actively dying, increasing comorbidities, frailty, other functional decline
3	**Family / Caregiver / Patient Preference** – always deprescribe statins if this group requests to do so

CONSIDER ADDITIONAL POTENTIAL HARMS

- Lipid lowering agents are considered preventative medication and do not provide comfort or symptom relief.[2]
- Ongoing lab monitoring is recommended to guide statin therapy: regular lipid panels and periodic liver function testing[1,9]
- Some studies show a potential risk of exacerbating diabetes. Statins can impair insulin release by inhibiting insulin secretion, effecting glucose metabolism. New onset diabetes risk is increased in patients if 1 or more risk factors for diabetes are already present (metabolic syndrome, impaired fasting glucose, BMI ≥ 30).[10-13]
- Patients with underlying liver or renal impairment are at an increased risk for hepatotoxicity, myopathy, rhabdomyolysis, and hematuria, especially with higher-dose statins (e.g., rosuvastatin 40mg, simvastatin 80mg, atorvastatin 80mg)[9]

REDUCE THE POTENTIAL FOR DRUG INTERACTIONS BETWEEN STATINS AND MEDICATIONS THAT ARE COMMONLY PRESCRIBED AT END OF LIFE:[9]

- Macrolide antibiotics (e.g., azithromycin, clarithromycin, erythromycin) and azole antifungals (e.g., itraconazole, fluconazole, ketoconazole) may increase serum statin levels leading to adverse events – rhabdomyolysis, acute renal failure.[9]
- Some anticoagulants [e.g., warfarin, dabigatran (Pradaxa), ticagrelor (Brilinta)] may increase serum statin levels leading to increased risk for statin toxicity or increased risk of bleeding.[9]
- Grapefruit consumption may increase some serum statin levels. Patients taking simvastatin, lovastatin, atorvastatin should avoid grapefruit and grapefruit juice. [9]

Patient & Caregiver Talking Points

The BUILD Model provides a structured process to discuss deprescribing with patients, family, and caregivers.[14] The basics of the BUILD mnemonic and sample conversational phrases for family and caregiver discussions are below.

Build	Understand	Inform	Listen	Develop
A foundation of trust and respect	What the family knows about the medication	The family about clinical evidence	To the family's goals and expectations	A plan of care in collaboration with family

- Patients are often concerned about stopping medications they may have been taking for a long time to prevent or slow disease progression. The deprescribing process is driven by available clinical evidence and clinician experience caring for patients at end of life.
- Tjia et al studied patient perception of discontinuing statins and found that fewer than 15% of patients taking statins worried about risks associated with discontinuation and fewer than 10% of patients expressed that stopping statins meant that physicians were giving up.15 Discontinuation does not affect patient prognosis or survival but provides benefit by reducing risk of drug interactions, adverse events, and problematic side effects.

- All deprescribing decisions are made in collaboration with the hospice interdisciplinary team and the patient's attending physician or other health care providers.
- Hospice and palliative care clinicians recommend deprescribing statins for patients in declining health, with renal or liver impairment, and if the expected prognosis is less than 6 months.

    - "We understand this can be stressful and you may have fears, worries or feel guilty stopping these medications. If you're not ready right now, let's plan to talk about it again later."
    - "What did your doctor tell you about the Crestor? What are your goals for this medication? The hospice team will continue to visit every week or so and your hospice nurse will keep track of your vitals. If we see any concerns, we will get in touch with your cardiologist."
    - "Our goal is to provide comfort, but your mom's simvastatin seems to be making her leg pain worse. Before we increase her pain medication dose again, let's try discontinuing this statin. Did you know statins can cause muscle pain in older adults, especially when their kidneys aren't as healthy as they used to be?"
    - "Your father seems to be declining and is having some difficulty swallowing. Have you noticed this? Wouldn't it be easier for him, and for you, if you didn't have to crush so many medications into applesauce? He might eat a bit more regular food that way too."

How to Deprescribe

- Statins may be discontinued without tapering. In hospice care, the risk of continuing statins exceeds any potential benefit.[2]
- Candidates for deprescribing statins include patients with reduced or limited life expectancy, those with a low risk of cardiovascular events, or patients experiencing side effects of statins such as muscle pain and fatigue.[2]

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