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Palliative Care Team

# Medicines Optimisation Guidance for Adults with a Limited Prognosis:

*Optimising medicines to improve symptom relief and comfort, aligned with each person's goals and priorities, while reducing treatment burden.*

**Developed by:**
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## Section 1: Introduction

This guidance is designed to support healthcare professionals across all care settings to undertake structured medication reviews for adults with a limited prognosis, ranging from days to short years, due to living with frailty, multi-morbidities and/or progressive illness. Frailty, often assessed using the Clinical Frailty Scale (CFS), is a well-recognised marker of reduced physiological reserve and increased vulnerability to medicine-related harm[4]. People with a CFS score of 6–7 living in the community, on average have a life expectancy of 3–4 years, while inpatients with a CFS score of 7 have an average life expectancy of around 1 year. These associations highlight the need for timely and individualised decisions about medicine use and provide a valuable framework for aligning treatment with prognosis.

In this context, the goals of medicines optimisation move from disease modification and life prolongation, towards supporting symptom management, comfort, quality of life and sustainability. Prescribing should be guided by the person's prognosis, values and 'what matters most' to them, using the pragmatic Scottish Polypharmacy 7-Step Approach to Appropriate Prescribing to ensure that reviews are structured, person centred and sustainable[1].

The guidance has been developed using evidence-based tools, supported by clinical consensus across care settings:

- **STOPPFrail (v2)**: Designed for people living with frailty and a prognosis typically of less than a year, to guide deprescribing decisions in the context of advanced decline[2].
- **STOPP/START (v3):** A validated, system–based tool for identifying potentially inappropriate medicines and prescribing omissions in older adults. Although not prognosis-specific, its focus on reducing harm and maximising benefit in people with multi-morbidity and polypharmacy makes it highly relevant for patients with a limited life expectancy of short years. Here, it has been adapted to guide decisions where longer-term preventative medicines may no longer align with individual goals[3].
- **Expert consensus:** Incorporating the clinical insight of local specialist teams and the national Scottish Polypharmacy Guidance (2025 to 2028)[1], ensuring recommendations are evidence-informed and applicable across a range of care contexts.

This guideline outlines:

- The aims and principles of medicines optimisation for people with a limited prognosis (Section 2).
- A structured process for review (Section 3).
- A prognosis-based medicines optimisation tool (Section 4) to support safe continuation, simplification or deprescribing in line with prognosis, goals of care and symptom burden.

## Section 2: Aims

The main aims of a structured medication review and medicines optimisation for adults with a limited prognosis are to:

- **Deprescribe safely**. Stop medicines that are unnecessary, inappropriate, or potentially harmful through a planned and monitored process.
- **Review ongoing treatments**. Assess long-term medicines for side effects, interactions, anticholinergic burden and whether they continue to offer meaningful benefit in the context of prognosis.
- **Prioritise symptom relief and quality of life**. Start or continue medicines that contribute to comfort, function, or the person's goals of care.
- **Reduce treatment burden**. Simplify regimens, minimise monitoring and avoid interventions that add workload or distress without clear benefit.
- **Apply the 7-Step Approach** systematically, to ensure prescribing is safe, effective, person-centred and sustainable (see Section 3).

## Section 3: Medicines Optimisation Principles – A Structured Review Approach

Medicines optimisation is a structured, person-centred process that focuses on what matters most to the individual. Prescribing decisions should align with their goals, prognosis and ability to tolerate treatment burden.

The Scottish Polypharmacy Guidance sets out a 7-Step Approach to Appropriate Prescribing, which provides a clear framework for review[1]. This should be applied systematically when triggers arise, such as:

- Clinical Frailty Scale (CFS) score ≥5[4]; recent step-down in function; new or recurrent falls.
- Completion or update of a ReSPECT form.
- Referral to palliative care or frailty teams.
- Concerns from any member of the multidisciplinary team regarding polypharmacy, treatment burden, or the appropriateness of current medicines.

### The 7-Step Approach to Appropriate Prescribing

**Step 1: What matters most?**

- Agree the person's goals, values, beliefs and preferences (e.g., manual dexterity, comfort, independence, symptom relief, reducing medicines). Document clearly in the patient's medical record.

**Step 2: Identify essential medicines**

- Gather a complete medication history: prescribed, over the counter, and complementary medicines (e.g., herbal remedies, homeopathic products, vitamins, minerals and nutritional supplements).
- Document **indication**, dose, route, formulation, frequency, duration, monitoring.
- Identify medicines critical for symptom control or immediate harm prevention.

- Check adherence and administration issues (e.g., remembering, swallowing difficulties, side effects, crushing tablets for enteral feeding, device use).

**Step 3. Stop unnecessary medicines**

- **In discussion with the person**, deprescribe medicines with no known indication, duplication or those misaligned with goals of care.
- Consider stopping long-term preventative medicines that have no realistic short-term benefit.
- Prioritise high-risk or burdensome medicines first, usually one at a time.
    - Decide whether to stop abruptly or taper.
    - Use tools such as Medstopper[8] to support safe withdrawal planning.
    - Communicate the rationale and agree a monitoring plan with the person and/or their carer.

**Step 4: Assess risk of harm**

- Consider frailty status, multi-morbidity, renal or liver impairment, drug-disease or drug-drug interactions, falls risk and anticholinergic burden using tools such as:
    - Rockwood Clinical Frailty Scale[4].
        - A validated frailty score (e.g., Clinical Frailty Scale (CFS)) to support your clinical assessment

          A **CFS ≥5** should prompt a review. A **score of 6 or above** indicates more advanced frailty and greater vulnerability to adverse effects.
    - Anticholinergic burden (ACB) guidance – WY ICS[5]
    - Medicines and Falls Risk Toolkit (RPS –endorsed)[6]
    - Cumulative toxicity tool and adverse drug reactions (ADR)[26]

**Step 5: Assess benefit vs. prognosis**

- Weigh expected time-to-benefit against life expectancy.
- Continue only where there is short-term or symptomatic benefit.

**Step 6: Optimise medicines to be continued**

- Ensure correct indication, dose, route and formulation.
- Simplify regimens where possible (e.g., once daily, combinations, patches where appropriate).
- Put in place medicines support (e.g. reminder chart, compliance aids, and tablet crusher e.g. for enteral feeding administration, carer involvement): see WY HCP Managing Medication[7].

**Step 7: Review and follow up**

- Agree and document a monitoring and review plan.
- Monitor for withdrawal or recurrence; reintroduce if deterioration occurs.
- In the final weeks or days, prioritise comfort and deprescribe more actively.

This step-by-step approach is summarised in **Appendix 1: Structured Medication Review Checklist**, with links to supporting tools.

# Section 4: Medicines Optimisation Tool

## 4.1. How to Find a Drug Class or Specific Drug

Drugs are grouped by therapeutic class with key example drugs. Use **Ctrl + F** to locate a specific drug or class. For each class the guidance is organised by three prognostic stages:

- Long months to short years
- Weeks to months
- Hours to days

## 4.2. Overview of Colour-Coding (Red/Yellow/Green)

- **Green** = *Appropriate to continue*
  - Start or continue if providing clear symptom relief, short-term benefit, or essential disease control (e.g., symptom relief for angina, insulin to prevent symptomatic hyperglycaemia).
  - Simplify the regimen and reduce treatment burden where appropriate.
- **Yellow** = *Review and optimise*
  - Requires regular review of dose, side-effects, interactions and ongoing benefit.
  - Continue if well tolerated and aligned with the person's goals; otherwise consider tapering or stopping.
  - Simplify regimen and reduce treatment burden where appropriate.
- **Red** = *Stop or taper*
  - Stop or taper where there is no meaningful benefit, or where risks or treatment burden outweigh benefit in the context of prognosis and what matters most to the person.
  - Document the rationale and a monitoring plan.

**Note:**
This colour-coding system is a guide, not a rulebook. It should always be applied within the **7-Step Approach to Appropriate Prescribing** (see Section 3), starting with the person's own priorities. A "red" medicine may sometimes be continued if strongly aligned with goals of care and a "green" medicine should still be reviewed if circumstances change.

### 4.3. Medicines Optimisation Tool

| Drug or Drug Class | Prognosis Long Months to Short Years<br>*Consider that the patient may wish to continue their medicines | Prognosis Weeks to Months<br>*Consider that the patient may wish to continue their medicines | Prognosis Days<br>*Consider that the patient may wish to continue their medicines |
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| **Gastrointestinal** | | | |
| **PPIs / $H_2$ - receptor antagonists (e.g., lansoprazole, omeprazole, famotidine)** | • **Review regularly.**<br>• **Continue** if: there is clear symptom benefit or an active indication (e.g., history of GI bleed, peptic ulcer, gastritis, GORD, or concurrent use of NSAIDs/steroids/antiplatelets).<br>• Use lowest effective dose and consider switching to PRN use.<br>• **Stop** if no ongoing need. | | • **Stop** to reduce treatment burden unless clearly needed for symptom relief (e.g., ongoing dyspepsia, bleeding).<br>• Unlikely to offer symptom benefit at this stage. |
| **Endocrine** | | | |
| **Oral hypoglycaemic agents (e.g., metformin, sulfonylureas, pioglitazone, DPP-4 inhibitors, GLP-1 analogues, acarbose, SGLT2 inhibitors)** | • **Continue if well tolerated and contributing to symptom-free glucose control.**<br>• Aim for **CBG 6–15 mmol/L (**individualise; agree with person).<br>• HbA1c target needs to be individualised, up to 75 mmol/mol.<br>• **Reduce or stop agents** stepwise if: eating less; losing weight; at risk of hypoglycaemia; or no longer contributing to symptom control.<br>• **SGLT2 inhibitors:** apply sick-day rules; stop if hypotensive or volume-depleted. May continue for HF symptom benefit if well tolerated.<br>• Involve Diabetes Specialist Nurses (DSNs) if control is unstable or complex.<br>• To support decisions use NICE, Glycaemic Control for Older People with Type 2 Diabetes and Frailty and or Multi-morbidity[9] and Diabetes UK Guidance towards EOL[10] | • **Review regularly.**<br>• Aim for **CBG 6–15 mmol/L** to avoid symptoms (individualise; agree with person).<br>• HbA1c target needs to be individualised, up to 75 mmol/mol, although not helpful with short prognosis.<br>• Minimise testing.<br>• **Reduce or stop agents stepwise** if: eating less; losing weight; at risk of hypoglycaemia or no longer contributing to comfort.<br>• Involve DSNs if control is unstable or complex.<br>• To support decisions use Diabetes UK Guidance towards EOL[10] | • **Stop oral agents**. No benefit at this stage, risk of harm.<br>• Check CBG only if symptomatic hypo- or hyperglycaemia is suspected.<br>• For LTHT patients: See Palliative Care intranet page; Managing diabetes at the end of life[11] |

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| **Insulin (e.g., long acting, short acting, mixed preparations)** | • **Continue if needed for symptom free control; aim for CBG target range 6-15mmol/L (individualise; agree with person).**<br>• HbA1c target needs to be individualised, up to 75mmol/mol.<br>• Prefer simple, once daily long-acting insulin where possible.<br>• Expect dose reduction with reduced oral intake or weight loss.<br>• Involve DSNs if control is unstable or complex.<br>• To support decisions use:<br>  ○ Glycaemic Control for Older People with Type 2 Diabetes and Frailty and or Multi-morbidity[9] and<br>  ○ Diabetes UK Guidance towards EOL[10] | • **Review regularly.**<br>• **Continue only** if preventing symptomatic hyperglycaemia. Simplify insulin regimen where appropriate.<br>• Reduce dose as needed, especially with reduced oral intake or weight loss.<br>• Monitor CBG daily or sooner if symptoms of hypo/hyperglycaemia arise.<br>• Involve DSNs if control is unstable or complex.<br>• To support decisions use Diabetes UK Guidance towards EOL[10] | **Type 1 diabetes**, pancreatitis or CF related diabetes:<br>• Continue insulin to avoid ketoacidosis, usually at reduced dose.<br>• For LTHT patients refer to: Palliative Care intranet page; Managing diabetes at the end of life[11]<br>• Involve DSNs if control is unstable or complex (e.g., unstable glucose control, sliding scale insulin, insulin pump).<br>**Type 2 diabetes**:<br>• Review insulin:<br>  ○ Consider stopping if very low dose (≤6 units a day) and CBG < 10 mmol/L.<br>  ○ Otherwise continue once daily long-acting preparation at a reduced dose (25 % less than the total previous daily insulin dose), if clearly needed for comfort.<br>• For LTHT patients refer to: Palliative Care intranet page; Managing diabetes at the end of life[11] |
| **Thyroid hormones (e.g., levothyroxine)** | • **Continue** to avoid hypothyroidism & associated symptoms and consider checking thyroid status. | | • **Review regularly**.<br>• Continue until oral route is lost. |
| **Osteoporosis medicines (e.g., bisphosphonates, denosumab)** | • **Review regularly as benefits accrue over years, limited short term impact.**<br>• **Stop** if: no recent fracture in last 12/24 months; ongoing symptoms; or if long term steroids have been stopped**.**<br>• **Continue** only if high fracture risk or still on long-term steroids. | • **Stop** - **no benefit with limited prognosis**.<br>• **Continue** only if used for symptom control (e.g., hypercalcaemia or metastatic bone pain).<br>• **Denosumab:** do not discontinue unless hypocalcaemia or close to end of life - risk of rebound fractures. | • **Stop** fracture prevention therapy; focus on comfort.<br>• **Continue** only if used for symptom relief (e.g., hypercalcaemia, metastatic bone pain). |

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| | • **Denosumab:** do not discontinue unless hypocalcaemia - risk of rebound fractures.<br>• **Bisphosphonates:** long residual effect; may still be appropriate for hypercalcaemia; or metastatic bone pain. | | |
| **Oestrogen hormones (e.g., hormone replacement therapy)** | • **Review** indication and consider stopping if previous VTE or Breast Cancer.<br>• Vaginal oestrogen can be effective in reducing UTIs in post-menopausal women, consider this before stopping. | | • **Stop after review of indication. In most cases** no symptom benefit.<br>• Continue for symptom management of UTIs. |
| **Hormone therapy for breast cancer: tamoxifen; aromatase inhibitors (e.g., anastrozole, letrozole)** | • **Review** and continue if hormone treatment is of palliative benefit. | | • **Stop** to reduce treatment burden. |
| **Hormone therapy for prostate cancer: LHRH analogues (e.g., goserelin, leuprorelin, triptorelin); anti-androgens (e.g., bicalutamide)** | • **Continue.** | • **Stop** – no benefit with limited prognosis. | • **Stop** – no symptom benefit. |
| **Cardiovascular** | | | |
| **Antihypertensives (e.g., ACE inhibitors, ARBs, beta blockers, calcium channel blockers, thiazides, diuretics)**<br><br>***NB: need to clarify indication as can be used for indications other than blood pressure*** | **Hypertension**<br>• **Continue** – individualise BP targets based on frailty; cardiovascular risk; risk of harm (e.g., postural hypotension, falls, AKI and fatigue); prognosis; patient preferences.<br>• **Risks of harm** may increase with confusion; infection; fluid imbalance (e.g., dehydration, vomiting, and concurrent diuretic use).<br>• **Aim**: < 140/80 mmHg; in ≥ 80yrs/frail, < 150/80mmHg, if tolerated (use standing BP if lower). | **Hypertension**<br>• **Review regularly** – focus on comfort and minimising harm.<br>• Standing BP guides decisions if lower.<br>• Risks may increase with infection, confusion, dehydration, or use of diuretics.<br>• **Continue** only if providing symptom benefit (e.g., angina, fluid overload in CCF). | **Hypertension**<br>• **Stop** - no symptom benefit.<br>• Discontinue to reduce treatment burden and avoid risks (e.g., hypotension, dizziness).<br>• Continue only if needed for: distressing tachycardia; pulmonary congestion. |

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| | • **Continue** if also for: treating angina; AF rate control; HFrEF, albuminuric CKD.<br>• **Consider de-intensifying if:** SBP < 130 mmHg with symptoms/harms (e.g., OH, fatigue, AKI).<br>• Balance time to benefit against prognosis; antihypertensive benefits accrue over years, while risks (e.g., falls, AKI, OH) may occur sooner.<br>• **Withdraw sequentially i**f on multiple agents, guided by BP targets, co-morbidities and NICE (Choice of antihypertensive drug, monitoring treatment and BP targets[12].)<br>• Avoid centrally acting agents and high-risk combinations (e.g., beta-blocker + verapamil).<br>• To support decisions use:<br>  • Right decisions: Hypertension[27]<br>  • Medicines and Falls Risk[6] | • **Stop** if used solely for BP control or causing harm (e.g., OH, fatigue, AKI).<br>• Time to benefit for BP prevention is long (months–years); near-term risks and treatment burden often outweigh benefit in this timeframe.<br>• Withdraw sequentially if on multiple drugs guided by Choice of antihypertensive drug, monitoring treatment and BP targets[12].<br>Avoid centrally acting agents and high-risk combinations (e.g., beta-blocker + verapamil).<br>• To support decisions use:<br>  • Right decisions: Hypertension[27]<br>  • Medicines and Falls Risk[6] | |
| | **Congestive Cardiac Failure**<br>• **Review** indication, benefit, and treatment burden**.**<br>• **Continue** if improving symptoms and quality of life.<br>• Reduce or stop if: low BP or symptomatic hypotension; hyperkalaemia or renal impairment; contributing to dizziness, fatigue, or falls.<br>• Benefits such as reduced HF admissions often occur after ≥1 month; weigh this against prognosis when adjusting or deprescribing**.**<br>• Where prognosis is short, preventive benefits are unlikely to be realised; align with goals of care and focus on relief of breathlessness/congestion (see diuretics).<br>• Prioritise comfort, symptom control, and quality of life.<br>• To support decisions use: Medicines and Falls Risk[6] | | **Congestive Cardiac Failure**<br>• **Stop** to reduce treatment burden and avoid risks (e.g., hypotension, dizziness).<br>• No symptom benefits. |
| **Diuretics (e.g., bendroflumethiazide,** | • **Review regularly.**<br>• **Continue** loop diuretics (e.g., furosemide) if managing symptomatic fluid overload (e.g., in CCF).<br>• Use the lowest effective dose. | | **CCF:**<br>• **Review regularly.**<br>• **Stop** unless clearly easing breathlessness from fluid overload. Discontinue if no |

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| **furosemide, bumetanide, spironolactone)** | • Avoid loop diuretics for isolated ankle oedema unless due to heart failure; liver disease; nephrotic syndrome – risks may outweigh benefit.<br>• Stop thiazides if used solely for hypertension, or the patient has: hypokalaemia; hyponatraemia; hypercalcaemia; gout.<br>• Monitor for: dehydration; postural hypotension; renal impairment; electrolyte imbalance.<br>• Deprescribe gradually if fluid overload resolves or harms outweigh benefits.<br>• Limited fluid intake requires adjustment of diuretic dose.<br>• To support decisions use: Medicines and Falls Risk[6] | | comfort benefit or fluid overload has resolved.<br>• If oral route lost, consider SC furosemide only if appropriate. |
| **Beta blockers for rate control (e.g., bisoprolol, atenolol)** | • **Continue if for symptomatic benefit (e.g., AF rate control, angina, CCF).**<br>• Stop if causing bradycardia (HR < 50 bpm); heart block without a pacemaker; symptomatic hypotension; asthma; intolerance.<br>• Avoid co-prescribing with verapamil or diltiazem (risk of heart block).<br>• Consider digoxin in CCF if beta-blockers are not tolerated or contraindicated.<br>• Consider gradual dose reduction if concerned about rebound tachyarrhythmia.<br>• To support decisions use: Medicines and Falls Risk[6] | • **Continue only if providing symptomatic benefit (e.g., rate control in AF or CCF symptom relief).**<br>• Stop if causing bradycardia; fatigue; hypotension; treatment burden outweighs benefit.<br>• Avoid co-prescribing with verapamil or diltiazem (risk of heart block).<br>• Consider digoxin in CCF if beta-blockers are not tolerated or contraindicated.<br>• Consider gradual dose reduction if concerned about rebound tachyarrhythmia.<br>• To support decisions use: Medicines and Falls Risk[6] | • **Stop** unless needed for symptom relief (e.g., distressing tachycardia**).**<br>• Stop if not tolerated or loss of oral route.<br>• Consider gradual dose reduction if concerned about rebound tachyarrhythmia.<br>• Do not replace unless essential for comfort. |
| **Lipid- lowering drugs (e.g., statins, fibrates, ezetimibe, PCSK9 inhibitors)** | • **Review indication and benefit with the patient.**<br>• **Statins:**<br>  • Primary prevention: stop (time to benefit equivalent to 2.5years).<br>  • Secondary prevention (e.g., post-MI), consider stopping if prognosis is < 2 years and no cardiovascular event (e.g., ACS, PCI), in the last 6 to 12 months. | • **Stop all lipid-lowering therapies** to: avoid unnecessary side effects (e.g., muscle pain, fatigue, and liver dysfunction) and to reduce treatment burden.<br>• No short-term benefit in primary or secondary prevention in this timeframe. | • **Stop all lipid-lowering therapies** to reduce treatment burden and focus on comfort.<br>• No short-term benefit in primary or secondary prevention. |

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| | • Secondary prevention benefit is greatest within 1–5 years post-event but becomes less relevant when survival is limited. If uncertain, consider a trial of cessation or switch to a low-dose statin to reduce adverse effects and polypharmacy.<br>• To support decisions use: A guide to deprescribing statins[13]<br>• **Ezetimibe, fibrates, and PCSK9 inhibitors:**<br>• Stop, unless: treating severe hypertriglyceridemia (fibrates only) to reduce pancreatitis risk or following recent major cardiovascular event with expected survival > 2 years.<br>• Avoid PCSK9 inhibitors in people living with frailty due to high treatment burden and unclear near-term benefit. | | |
| **Antianginals (e.g., beta blockers, nitrates, nicorandil, ranolazine)** | • **Review – continue only if angina symptoms have occurred within the past 12 months.**<br>• May no longer be needed if mobility is limited and chest pain is no longer reported.<br>• Antianginals relieve angina symptoms, but they do not: reduce mortality; prevent heart attacks (MI); modify the disease or offer any long-term survival benefit.<br>• **Taper gradually** if stopping to avoid rebound angina symptoms.<br>• Ensure GTN spray is available for breakthrough chest pain. | | • **Stop** - no symptom benefit.<br>• Focus on comfort.<br>• Ensure adequate pain relief. |
| **Digoxin (e.g., for AF or CCF symptom relief)** | • **Continue if used for AF rate control or symptom relief in CCF.**<br>• **Review** regularly - consider stopping if: sinus rhythm; no clear benefit; renal impairment is present (↑ risk of toxicity).<br>• Consider as an alternative if beta-blockers are not tolerated. | • **Review - continue only if providing symptom relief** (e.g., distressing tachycardia or CCF symptoms).<br>• Stop if **not tolerated** or in **renal impairment** (↑ toxicity risk).<br>• Avoid routine use in people living with frailty unless strongly indicated. | • **Stop** - no symptom benefit.<br>• Risk of toxicity in renal impairment and reduced clearance.<br>• Discontinue to reduce treatment burden or if oral route is lost.<br>• Prioritise comfort. |

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| **Peripheral Vasodilators Used for Non-Hypertensive Indications (e.g., nifedipine for Raynaud's phenomenon or smooth muscle spasm)** | • **Review – continue only if providing meaningful symptom relief (e.g., smooth muscle spasm,** vasospastic angina, Raynaud's phenomenon).<br>• Stop if used for claudication, vascular prevention, or no longer providing benefit. | • **Review – continue only if relieving distressing symptoms (e.g., vasospasm, Raynaud's, angina).**<br>• Stop if used for prevention alone (e.g., intermittent claudication) or if no current symptom benefit. | • **Review and stop** unless clearly providing symptom relief and oral route is tolerated**.**<br>• Prioritise comfort.<br>• Discontinue if used for prevention or if no immediate benefit. |
| **Antiarrhythmics (e.g., Amiodarone)** | • **Review – continue only if treating symptomatic arrhythmia unresponsive to safer alternatives.**<br>• **Stop** if no recent symptoms or if adverse effects emerge (e.g., bradycardia, thyroid, liver, or lung toxicity).<br>• **Avoid** routine use in people living with frailty due to long-term toxicity risk. | • **Review – continue only if controlling symptomatic arrhythmia.**<br>• **Stop** if no recent arrhythmia or if risks outweigh benefit (e.g., bradycardia, thyroid, liver, or lung toxicity).<br>• **Avoid** if used for prevention alone in people living with frailty or declining function. | • **Stop** - no symptom benefit.<br>• Focus on comfort and reduce treatment burden. |
| **Antiplatelet and anticoagulants** | | | |
| **Antiplatelets (e.g., aspirin, clopidogrel, dipyridamole)** | • **Review regularly**<br>**Primary prevention:**<br>• **Stop** - bleeding risk likely outweighs benefit.<br>**Secondary prevention**<br>• **Review if previous cardiovascular event (e.g., ACS, PCI, Stroke/TIA, MI) or AF, discuss with cardiology as needed.**<br>• Treatment regimens are not absolute and can be shortened or extended based on bleeding risk; thromboembolic risk; overall cardiovascular risk; prognosis.<br>• Time to benefit is typically months to years; in limited prognosis, bleeding risk and treatment burden may outweigh benefit.<br>• **AF**: Aspirin alone should not be prescribed for stroke/TIA prevention in AF where anticoagulation is indicated. | **Primary prevention – Stop**: No meaningful benefit in this timeframe; discontinue to reduce tablet burden and bleeding risk.<br>**Secondary prevention**<br>• **Review if previous cardiovascular event (e.g., ACS or PIC Stroke/TIA, MI) or AF, discuss with cardiology.**<br>• Treatment regimens are not absolute and can be shortened or extended based on bleeding risk; thromboembolic risk; overall cardiovascular risk; prognosis.<br>• **AF**: Aspirin alone should not be prescribed for stroke/TIA prevention in AF where anticoagulation is indicated. | • **Stop** unless treating a distressing symptom, no prevention benefit remains.<br>• Risk of bleeding outweighs use.<br>• Focus on comfort and reduce treatment burden. |

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| **Anticoagulants oral (e.g., warfarin, rivaroxaban, apixaban, dabigatran, edoxaban)** | • **Continue if benefit is likely and bleeding risk is acceptable.**<br>• Use shared decision-making with Garfield-AF score/ $CHA_2DS_2$-VASc (stroke risk) and ORBIT (bleeding risk).<br>• Avoid rigid survival cut-offs.<br><br>**Atrial fibrillation or VTE <6 months ago**:<br>• Continue if: recent VTE; symptomatic AF; $CHA_2DS_2$-VASc score indicates high stroke risk; bleeding risk acceptable; prognosis > 1-2 years.<br>• Considering stopping if AF is asymptomatic, and bleeding risk is high.<br>• Consider switching warfarin to a **DOAC** if suitable to reducing monitoring burden (not for complex indications).<br><br>**VTE >6 months ago:**<br>• Consider reducing to a prevention dose (apixaban/rivaroxaban) or<br>• Consider stopping if treatment burdensome.<br><br>**Complex indications**<br>• **Mechanical valve and antiphospholipid syndrome:**<br>  ○ Warfarin remains preferred.<br>  ○ Consider **LMWH** if warfarin is high-risk or poorly tolerated.<br>  ○ DOACs are not recommended for mechanical valves or high-risk APS.<br>• **Antiphospholipid syndrome (APS):**<br>  ○ If bleeding risk is high, consider switching to LMWH. | • **Review – prioritise comfort and minimise burden.**<br>• Continue only where short-term benefit clearly outweighs bleeding risk or treatment burden.<br>• **In atrial fibrillation**, patients with active bleeding, recurrent bleeding, or very high bleeding risk (e.g., GI cancers, frailty, or falls) should discuss stopping anticoagulation. In this context, reducing stroke risk from e.g. 5% to 2% over a year is often outweighed by a >50% chance of all-cause mortality. New initiation of anticoagulation in this setting is rarely appropriate.<br>• Use shared decision-making to balance prognosis, bleeding risk, and patient priorities. Risk scoring systems (e.g., $CHA_2DS_2$-VASc, HAS-BLED, ORBIT) are less useful in this context, as older people and those living with frailty will score highly for both stroke and bleeding risk. Clinical context and individual goals should guide decisions<br><br>**AF / VTE:**<br>• Consider switching warfarin to a DOAC if short-term benefit expected and INR monitoring is burdensome.<br>• For VTE >6 months ago, consider reducing apixaban or rivaroxaban to a prevention dose or stopping if treatment burden is high. | • **Stop** unless treating a distressing symptom.<br>• No prevention benefit remains.<br>• Risk of bleeding outweighs use.<br>• Focus on comfort and reduce treatment burden. |

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| | ○ DOAC may be acceptable in VTE-only APS cases.<br>• **Unusual site venous thrombosis** (e.g., portal, mesenteric, cerebral veins):<br>○ Consider switching to DOAC (possible unlicensed use, discuss with anticoagulation or thrombosis team) or LMWH.<br>• **Arterial thrombosis and peripheral vascular disease (PVD):** weigh bleeding risk and consult local vascular advice /guidance if needed.<br><br>**Check renal function and dosing**:<br>• Stop **dabigatran** if CrCl <30 mL/min.<br>• Stop **apixaban, edoxaban, rivaroxaban** if CrCl <15 mL/min.<br>• Review DOAC dosing based on age, renal function, and actual body weight.<br>• Adjust LMWH dose if CrCl <30 mL/min and dose according to actual body weight.<br>If unsure seek specialist advice. | **Complex indications**<br>• **Mechanical valve:**<br>○ Warfarin remains standard.<br>○ Consider **LMWH** if warfarin is high-risk or poorly tolerated or monitoring is a burden or reduce INR target (e.g., 2.5).<br>○ DOACs are not recommended.<br>• **Antiphospholipid syndrome (APS):**<br>○ If bleeding risk is high, consider switching to LMWH.<br>○ DOAC may be acceptable in VTE-only APS cases.<br>• **Unusual site venous thrombosis** (e.g., portal, mesenteric, cerebral veins):<br>○ Consider switching to DOAC (possible unlicensed use, discuss with anticoagulation or thrombosis team) or LMWH.<br>• **Arterial thrombosis and PVD:** weigh bleeding risk and consult local vascular advice /guidance if needed.<br><br>**Check renal function and dosing:**<br>• Stop dabigatran if CrCl <30 mL/min.<br>• Stop apixaban, edoxaban, or rivaroxaban if CrCl <15 mL/min.<br>• Review DOAC dosing based on age, renal function, and actual body weight.<br>• Adjust LMWH dose if CrCl <30 mL/min and dose according to actual body weight.<br><br>If unsure seek specialist advice. | |

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| **Injectable anticoagulants (e.g., LMWH, fondaparinux)** | • **Continue if benefit is likely and the treatment is tolerated.**<br>• **Prophylactic use:**<br>  ○ Continue only if there is **increased VTE risk** (e.g., immobility, active cancer).<br>  ○ Consider DOAC if oral route preferred, though this is unlicensed for prophylaxis.<br>  ○ Reassess regularly as prognosis evolves.<br>• **Therapeutic use:**<br>  ○ Continue if recent or symptomatic VTE.<br>  ○ Consider **once-daily** LMWH if on BD dosing. **Warfarin: i**f unsuitable, consider switch to LMWH.<br>• **Dose adjustments**: Adjust LMWH dose if CrCl <30 mL/min and dose according to actual body weight. | • **Review** - **prioritise comfort and minimise burden.**<br>• **Prophylactic use:**<br>  ○ Stop unless VTE risk remains high (e.g., cancer-related or recent immobility).<br>• **Therapeutic use:**<br>  ○ Continue only if treating symptomatic VTE with expected short-term benefit.<br>  ○ Avoid initiating new injectable anticoagulants.<br>  ○ Review renal function and injection burden frequently.<br>  ○ Reassess alignment with patient goals | • **Stop -** no prevention or treatment benefit remains.<br>• Increases risk of bleeding, bruising, and injection-related discomfort.<br>• Focus on comfort and reduce treatment burden. |
| **Respiratory System** | | | |
| **Inhalers:**<br>**Anti-muscarinic bronchodilators (e.g., ipratropium, tiotropium)**<br>**Beta-2-agonists (e.g., salbutamol)**<br>**Steroid inhalers (e.g., beclomethasone)** | • **Review - continue only if there is a clinical indication for each drug class.**<br>• Check inhaler technique and ability to use the device reliability; simplify regimens.<br>• Sustainability: choose the lower-carbon option if clinically appropriate; avoid blanket switch.<br>• Focus on prevention of exacerbations and relief of distressing breathlessness with the simplest effective regimen according to local asthma and COPD guidelines.<br>• SABA overuse flag: >3 canisters/year (or >1 per month) suggests poor control thus review preventer / technique/adherence. Consider switching to MART regimen, if appropriate, for asthma.<br>• Inhaler devices are preferred over nebulised therapy where patients can use inhaler devices effectively.<br>• **Asthma:**<br>  ○ Do not stop inhaled corticosteroids, due to risk of deterioration of asthma control and asthma exacerbations.<br>• **Consider changing inhaled therapy:**<br>  ○ Where inhaler technique is poor and change to a device that they can use. | • **Stop -** all regular inhalers and nebulisers (no role in disease control or symptom prevention at this stage).<br>• Consider **salbutamol (inhaler or nebuliser)** only if providing clear, short-term relief from breathlessness and the patient can still use the device.<br>• Stop if not effective or causing distress, fatigue, or treatment burden. |

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| | ○ In patients with good disease control, consider simplifying regimen according to West Yorkshire Asthma or COPD guidelines, e.g., use of combination inhalers, stepping down treatment.<br>• To support decisions use:<br>○ West Yorkshire COPD Prescribing Guidance [14]<br>○ West Yorkshire Adult Asthma Management and Prescribing Guideline [15] | |
| **Theophylline** | • **Review - continue only if: clearly relieving symptoms; blood levels are in the therapeutic range; no safer alternative is effective**.<br>• Stop if: inhalers provide adequate symptom relief; toxicity risk is increased (e.g., decline in renal function, weight loss, drug interactions); monitoring is burdensome.<br>• Theophylline offers minimal benefit, many interactions, and a narrow therapeutic window.<br>• Avoid use in people living with advanced frailty or if unable to monitor levels safely and increased risk of harm. | • **Stop -** no role in symptom relief or disease control at this stage.<br>• High risk of toxicity due to: narrow therapeutic index; drug interactions; declining renal function or weight.<br>• Prioritise comfort, reduce monitoring, and treatment burden. |
| **Leukotriene receptor antagonists (e.g., montelukast)** | • **Review - stop unless clearly relieving asthma symptoms.**<br>• No role in COPD or if asthma is well controlled with inhalers alone.<br>• Stop if no current asthma diagnosis, or ongoing benefit.<br>• Prioritise simplifying regimen and reducing treatment burden. | • **Stop** - no role in symptom control.<br>• Provides no immediate benefit for breathlessness, cough, or distress.<br>• Discontinue to reduce treatment burden and prioritise comfort. |
| **Central Nervous System** | | |
| **Cholinesterase inhibitors for dementia (e.g., donepezil, rivastigmine, galantamine)** | • **Review – consider stopping in advanced or end-stage dementia.**<br>• **Stop** if: no clear benefit (e.g., no slowing of cognitive or functional decline); significant side effects (e.g., bradycardia, falls, and anorexia); high treatment burden.<br>○ To support decisions use: Medicines and Falls Risk[6]<br>• Deprescribing can be trialled and reversed if symptoms deteriorate. Refer to dementia deprescribing guidance [16] | • **Stop - all dementia medicines.**<br>• Unlikely to provide benefit in symptom control, cognition, or function at this stage.<br>• May contribute to bradycardia; falls; nausea; unnecessary oral medication burden; carer confusion about ongoing goals.<br>• Focus on comfort, dignity, and minimising interventions. |
| **Memantine for dementia** | • **Continue if tolerated.**<br>• May provide behavioural benefit, especially in those with BPSD.<br>• No MMSE cut-off for discontinuation. | • **Stop** if: no longer tolerated or oral route is lost. |

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| | • If stopped, benefit may not return on rechallenge.<br>• To support decisions consider referring to **Maudsley Prescribing Guidelines (14th ed.) pg. 640**[25] | • Otherwise, may **continue,** if providing clear behavioural benefit. |
| **Parkinson's disease medicines (e.g., levodopa/benserazide [Madopar®], rotigotine)** | • **Continue**. Symptom benefit.<br>• Consider rotigotine TD patch if unable to swallow (see rotigotine guidance)[17] | • **Continue**.<br>• Consider rotigotine TD patch if unable to swallow (see rotigotine guidance)[17] |
| **Antiepileptics for seizures or neuropathic pain (e.g., levetiracetam, phenytoin, sodium valproate, carbamazepine)** | **Seizures**<br>• **Continue if treating epilepsy or preventing seizures.**<br>• **Review** gabapentinoids: monitor renal function; sedation; falls risk.<br>• If stopping, taper slowly to minimise withdrawal.<br>• To support decisions use: Medicines and Falls Risk[6] | **Seizures**<br>• Continue for seizure control.<br>• Consider switching to SC (e.g., midazolam or levetiracetam).<br>• Seek advice from Palliative Care, if unsure. |
| | **Neuropathic pain**<br>• **Review** - **continue,** only if providing clear relief from neuropathic pain and is well tolerated.<br>• For gabapentinoids: monitor renal function; sedation; falls risk.<br>• **Stop** if no neuropathic pain symptoms or side effects outweigh benefit (e.g., sedation, dizziness, confusion).<br>• Consider switching to safer or simpler agents (e.g., gabapentin or duloxetine). Taper slowly.<br>• To support decisions use: Medicines and Falls Risk[6] | **Neuropathic pain**<br>• **Stop -** if no clear benefit or unable to take orally.<br>• Prioritise comfort and simplify regimen. |
| **Antipsychotics for psychiatric disorder (e.g., olanzapine, risperidone, quetiapine)** | • **Continue if treating schizophrenia, bipolar disorder, or persistent psychotic symptoms with clear benefit.**<br>• **Review** regularly, if used long term for BPSD.<br>• Consider cautious reduction if: stable; causing sedation; falls; confusion. To support decisions use: Medicines and Falls Risk[6]<br>• **Avoid abrupt stopping** if previous attempts led to relapse.<br>• Seek psychiatry advice if unsure. | • **Stop** unless clearly relieving distress (e.g., psychosis, terminal agitation).<br>• Continue only if symptom benefit.<br>• Consider SC alternatives (e.g., haloperidol, levomepromazine).<br>• Taper if long-term use; avoid abrupt withdrawal.<br>• Seek specialist advice if unsure. |
| **Lithium (mood stabiliser)** | • **Continue only with clear benefit and close monitoring.**<br>• **Review** if oral route or monitoring is difficult.<br>• Stop if risk of toxicity (e.g., renal impairment, dehydration).<br>• Seek psychiatry advice if unsure. | • **Stop** no benefit at this stage and high risk of toxicity.<br>• Seek psychiatry advice if unsure. |

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| **Antipsychotics for nausea, vomiting or agitation. (e.g., haloperidol, levomepromazine)** | • **Continue if providing symptom relief.**<br>• Use the lowest effective dose and review regularly.<br>• Stop if causing excessive sedation; extrapyramidal symptoms; no clear benefit.<br>• Use with caution in dementia and people living with frailty due to increased risk of stroke, falls, and sedation.<br>• To support decisions use: Medicines and Falls Risk[6] | | • **Continue.** Symptom benefit.<br>• Consider alternative route when oral route is lost. |
| **Antidepressants for <u>depression or anxiety disorder</u> *(for neuropathic pain, see below)* (e.g., tricyclic antidepressants such as amitriptyline; SSRIs such as citalopram or sertraline]; SNRIs such as duloxetine and venlafaxine; mirtazapine)** | • **Review for tolerability, side effects, and ongoing need.**<br>• To support decisions use: Medicines and Falls Risk[6]<br>• **Continue** if stable and beneficial, especially for recurrent depression.<br>• Avoid stopping prematurely**.**<br>• **Mirtazapine**: may support sleep/appetite. Monitor for hyponatraemia.<br>• **SSRIs**: monitor for hyponatraemia; GI bleed (consider PPI); falls risk; QT prolongation (especially citalopram, consider ECG if history of syncope).<br>• **Tricyclics**: avoid in people living with frailty; dementia; delirium; cardiac disease; constipation; falls risk (high Anticholinergic burden (ACB) guidance – WY ICS[5] **).**<br>• **Sertraline** is preferred if postural hypotension or falls are a concern.<br>• **Stop** if no benefit, especially in advanced frailty or intolerable side effects or oral route is lost.<br>• For reducing and stopping guidance: SPS[18] or Right Decisions: Antidepressants[19]<br>• Seek psychiatry advice if uncertain. | | • **Stop i**f not contributing to comfort.<br>• Tapering often unnecessary.<br>• Prioritise symptom control and reduce treatment burden. |
| **Antidepressants for <u>neuropathic pain</u> e.g., tricyclic antidepressants such as amitriptyline; SNRI such as duloxetine)** | • **Review for effectiveness, tolerability and side effects.**<br>  ○ To support decisions use: Anticholinergic burden (ACB) guidance – WY ICS[5] and Medicines and Falls Risk[6]<br>• **Continue** if clear symptom control and safer alternatives are unsuitable.<br>• Stop if no neuropathic pain symptoms or if side effects outweigh the benefit (e.g., sedation, dizziness, confusion).<br>• **Amitriptyline** (ACB 3): avoid in frailty; dementia; delirium; falls; constipation; urinary retention; cardiac disease.<br>• Consider switching to **nortriptyline**, **duloxetine**, or gabapentinoid.<br>• For reducing and stopping guidance: SPS[18] or Right Decisions: Antidepressants[19] | | • **Continue** until oral route is lost (if symptom benefit). |
| **Benzodiazepines and Z-drugs for anxiety and insomnia disorders** | • **Review – consider stopping if no clear symptom benefit.** | • **Review – continue only if clearly providing symptom relief.** | • **Continue** if providing comfort or symptom relief.<br>• Use SC or buccal route. |

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| **(e.g., lorazepam, diazepam, zopiclone)** | • **Risks** in people living with frailty**:** falls; confusion; dependence; sedation.<br>  ○ To support decisions use: Medicines and Falls Risk[6]<br>• If used long term, taper gradually (consider diazepam for slow wean).<br>  ○ For guidance consider: Right Decisions: Benzodiazepines and z-drugs[20] OR Ashton Manual – Benzodiazepine Withdrawal Guide[21]<br>• Avoid long-term use for insomnia; consider alternatives (e.g., mirtazapine, CBTi, sleep hygiene).<br>• Note: BNZs may be appropriate short-term or intermittently in palliative care. Use clinical judgement and seek palliative care advice if needed. | • **Risks** in people living with frailty**:** falls, confusion, dependence, sedation.<br>  ○ To support decisions use: Medicines and Falls Risk[6]<br>• Avoid long-term use for insomnia; consider alternatives (e.g., mirtazapine, CBTi, sleep hygiene).<br>• If deteriorating or losing oral route, consider switching or stopping.<br>• Taper gradually if used long term (consider diazepam for slow wean).<br>  ○ For guidance consider: Right Decisions: Benzodiazepines and z-drugs[20] OR Ashton Manual – Benzodiazepine Withdrawal Guide[21]<br>• BNZs may still be appropriate in palliative care (e.g., anxiety, breathlessness, agitation, seizures. Use clinical judgement and seek palliative care advice if needed. | • Indications: agitation, anxiety, breathlessness, seizures, insomnia.<br>• If already on long term BNZ, avoid abrupt withdrawal.<br>• Seek palliative care advice if needed. |
| **Antihistamines (e.g., cetirizine, chlorpheniramine)** | • **Review – continue only if symptoms of troublesome itch, allergy, or hay fever are relieved.**<br>• **Chlorpheniramine** and other sedating antihistamines have a **high** anticholinergic burden[5] – avoid in frailty, delirium, dementia, cardiac disease, constipation, or falls risk.<br>• Prefer **non-sedating agents** (e.g., cetirizine, loratadine) if antihistamine still needed.<br>• To support decisions use**:** Medicines and Falls Risk[6] for drug classes linked to postural hypotension, sedation, and increased fall risk. | | • **Stop** unless providing specific symptom relief and the oral route is tolerated. |
| **Anticholinergics in general** | • **Review regularly and deprescribe where possible.**<br>• Anticholinergic medicines are associated with significant risks in people living with frailty: cognitive decline; delirium; falls, sedation; constipation; urinary retention.<br>• **For all patients**, calculate their total Anticholinergic Cognitive Burden (ACB) score using West Yorkshire ACB guidance[5] – a cumulative score of 3 or more is associated with a higher risk of cognitive impairment, falls, and hospital admissions. | | • **Stop**. If no symptom benefit. |

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| | • To support decisions use: Medicines and Falls Risk[6] for drug classes linked to postural hypotension, sedation, and increased fall risk. | |
| **Opioids e.g. morphine, oxycodone** | • **Review indication, risk/benefits**.<br>• **Continue** at lowest dose to control symptoms and consider regular laxatives.<br>• To support decisions use: opioid guidance.[14] | • **Continue.** Symptom benefit.<br>• Consider alternative route.<br>• To support decisions use: opioid guidance. |
| **Genitourinary** | | |
| **Alpha receptor blockers (e.g., doxazosin, prazosin, tamsulosin)** | • **Review - continue only if relieving urinary symptoms (e.g., painful bladder spasms).**<br>• Stop if: catheter in situ; **orthostatic hypotension**; **falls**; **micturition syncope**.<br>• Alpha-blockers may contribute to dizziness and falls in people living with frailty.<br>• Regularly reassess in context of **continence status**, **blood pressure**, and **prognosis**.<br>• To support decisions use**:** Medicines and Falls Risk for drug classes linked to postural hypotension, sedation, and increased fall risk. | • **Stop unless relieving painful bladder spasms.**<br>• Discontinue if prescribed for prostatic symptoms alone (e.g., LUTS, BPH) — no meaningful benefit at this stage.<br>• Stop if catheter is in situ.<br>• Continue only if providing comfort and oral route is still available.<br>• Alpha-blockers can contribute to hypotension, drowsiness, or falls, and offer no benefit at the end of life. |
| **5-alpha reductase inhibitors (e.g., finasteride, dutasteride)** | • **Review – continue only if still providing symptom benefit (e.g., bothersome LUTS/BPH).**<br>• Stop if catheter in situ or if no longer indicated (e.g., symptoms resolved, prognosis limited).<br>• Finasteride has a delayed onset of action (months) and limited value in short prognosis.<br>• Consider switching to a short-acting agent (e.g., tamsulosin) if symptom relief is still needed.<br>• If anticholinergic burden is a concern, consider mirabegron for persistent bladder symptoms. | • **Stop** – No role in symptom management at end of life.<br>• Offers no short-term benefit.<br>• Discontinue when: oral route is lost; to reduce treatment burden; catheter in place (prostate-specific treatment no longer necessary)<br>• Focus on comfort. |
| **Anticholinergics for overactive bladder or incontinence (e.g., oxybutynin** [very high ACB], t**olterodine**, s**olifenacin, mirabegron)** | • **Review – continue only if the patient reports a clear symptomatic benefit.**<br>• Anticholinergics usually lessen wet episodes but might not lead to significant improvement; they can be discontinued if the patient is uncertain of their benefit.<br>• Avoid anticholinergics in people living with frailty, dementia, falls risk, cardiac disease, or constipation due to high anticholinergic burden[5] . | • **Stop -** No role in symptom management at end of life; effects take days to weeks.<br>• Anticholinergics provide no short-term benefit and may increase delirium, dry mouth, and constipation. |

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| | • Consider switching to **mirabegron** if symptoms persist and renal function is adequate, as may be better tolerated.<br>• To support decisions use**:** Medicines and Falls Risk[6] | • If painful bladder spasms occur, consider PRN hyoscine butylbromide (SC).<br>• Continence control is no longer a goal- catheterisation is often in place.<br>• Focus on comfort. |
| **Phosphodiesterase-5 inhibitors (e.g., sildenafil, tadalafil)** | • **Review** - **considering stopping.**<br>• Unlikely to offer meaningful benefit in limited prognosis.<br>• Inappropriate with nitrates or in heart failure due to risk of hypotension.<br>• May contribute to postural hypotension and falls. To support decisions use**:** Medicines and Falls Risk[6]<br>• Discuss goals of care and individual priorities. | • **Stop -** no benefit at the end of life.<br>• Discontinue:<br>  ○ To reduce treatment burden.<br>  ○ Avoid risks.<br>  ○ When oral route is lost. |
| **Musculoskeletal** | | |
| **NSAIDs (e.g., ibuprofen, naproxen, celecoxib, parecoxib)** | • **Review – continue** only if providing clear symptom benefit (e.g., inflammatory or cancer pain), and no safer alternative exists.<br>• Use the **lowest effective dose** and consider a **PPI** to reduce GI risk.<br>• **Avoid** long term use (>2 months) in high-risk patients: age >65; history of GI bleed; AKI or CKD (eGFR <50); heart failure; uncontrolled hypertension; concurrent use of steroids, antiplatelets, anticoagulants, or SSRIs (↑ bleeding risk).<br>• Avoid in NSAID- sensitive asthma.<br>• Celecoxib preferred in people living with frailty due to lower GI/CVS risk and no effect on platelets.<br>• Stop if used for non-specific pain without clear ongoing benefit. | • **Stop** all regular NSAIDs.<br>• No role in disease control or symptom prevention at this stage.<br>• Consider SC parecoxib only if needed for short-term pain relief and oral route is lost.<br>• Prioritise comfort, reduce treatment burden, and monitor for injection site reactions if used. |
| **Paracetamol (e.g., oral, IV)** | • **Continue if clear symptom benefit.**<br>• Caution in patients living with frailty (Paracetamol Guidance)[23] - risk of overdosing and treatment burden. | • **Stop** to reduce treatment burden or when PO route is lost. |
| **Systemic corticosteroids (e.g., dexamethasone, fludrocortisone, prednisolone)** | • **Review – continue only if there is clear ongoing benefit for symptom control or disease-specific indication: raised intracranial pressure (e.g., brain metastases); obstructive syndromes (e.g., SVC, bowel, ureter, and bronchus); spinal cord/nerve compression; persistent nausea, vomiting, or poor appetite; hormone-sensitive cancers or paraneoplastic syndromes.**<br>• **Stop** or reduce if: no clear symptom benefit; no active inflammation; significant side effects (e.g., agitation, hyperglycaemia, infection). | • **Review indication** – continue only if clearly needed for symptom control (e.g., cerebral oedema, spinal cord compression, SVC obstruction).<br>• **Stop** if no ongoing symptom benefit. |

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| | • If continuing: monitor CBGs; consider PPI, bone protection, PCP prophylaxis; document (indication, review date, and stop date); taper if used >3 weeks; consider temporary dose increase if acutely unwell.<br>• To support decisions use: steroids and hyperglycaemia guidance[24]. | | • If risk of withdrawal symptoms (e.g., after >3 weeks' use), taper or continue at lowest effective dose.<br>• Switch to SC dexamethasone if oral route is lost.<br>• Seek palliative care advice if unsure. |
| **Disease-modifying anti-rheumatic drugs (e.g., methotrexate, sulfasalazine)** | • **Review indication.**<br>• **Continue** if symptom benefit.<br>• Discuss with specialist before stopping. | | • **Stop.** No symptom benefit. |
| **Colchicine** | • **Review** and stop if eGFR <10 | | • **Stop.** No symptom benefit. |
| **Quinine** | • **Review** and stop if no benefit, known to prolong QTc | | • **Stop**. No symptom benefit. |
| **Nutrition and Supplements** | | | |
| **Parenteral Nutrition (Inpatient and home)** | • **Continue.**<br>• Review regularly in liaison with the Specialised Intestinal Failure (SIF) Team **/** Nutrition Support Team (NST) for patients known to them**.**<br>• For additional medicines, check the home PN prescription (which may not appear on the GP system) and/or eMeds (for inpatients) and assess on an individual basis in discussion with the SIF/NST. | • **Review regularly** in liaison with Specialised Intestinal Failure (SIF) team/ Nutrition Support Team (NST) for patients known to them**.**<br>• For additional medicines, check the home PN prescription (which may not appear on the GP system) and/or eMeds (for inpatients) and assess on an individual basis in discussion with the SIF/NST. | • **Review** - continue or stop and change to suitable intravenous fluid for symptom relief of dehydration if appropriate.<br>• Liaise with Specialised Intestinal Failure (SIF) team/ Nutrition Support Team (NST) for patients known to them**.**<br>• Nutritional content of parenteral nutrition unlikely to offer any benefit at this stage. |
| **Intravenous Fluids (Inpatient and home)** | • **Continue.**<br>• Review regularly in liaison with Specialised Intestinal Failure (SIF) team / Nutritional Support Team (NST) for patients known to them.<br>• For additional medicines, check the home PN prescription (which may not appear on the GP system) and/or eMeds (for inpatients) and assess on an individual basis in discussion with the SIF/NST. | • **Review regularly** in liaison with Specialised Intestinal Failure (SIF) team/ Nutrition Support Team (NST) for patients known to them**.**<br>• For additional medicines, check the home PN prescription (which may not appear on the GP system) and/or eMeds (for inpatients) and assess on an individual basis in discussion with the SIF/NST. | • **Review -** stop or continue (with suitable IV fluid) for symptom relief of dehydration, if appropriate.<br>• Liaise with Specialised Intestinal Failure (SIF) team/ Nutrition Support Team (NST) for patients known to them. |
| **Nutritional supplements** | • **Stop** when prescribed for prophylaxis rather than treatment of malnutrition. | | |

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| **Calcium** | • **Review – continue only if treating symptomatic hypocalcaemia, confirmed deficiency, or as part of ongoing osteoporosis therapy.**<br>• Only continue with **denosumab** or another high-risk osteoporosis drug and there is a clear rationale to maintain treatment despite limited prognosis.<br>• No evidence of benefit for fracture prevention in frailty or life expectancy <2 years.<br>• Risks: constipation, kidney stones, and contribute to tablet burden.<br>• Stop if no active deficiency or if osteoporosis treatment has been discontinued. | | • **Stop.** No symptom benefit |
| **Vitamin D (e.g., ergocalciferol and colecalciferol)** | • **Review – stop unless treating confirmed or symptomatic deficiency.**<br>• Vitamin D does not reduce falls, fractures, cardiovascular events, or cancers in people living with frailty with limited prognosis.<br>• Often continued preventively without benefit.<br>• Stop unless deficiency is documented or clinically relevant. | | • **Stop.** No symptom benefit |
| **Folic acid** | • **Review – continue only if used for a specific ongoing indication** (e.g., malabsorption, malnutrition, methotrexate therapy or megaloblastic anaemia).<br>• Often continued long after a completed course (1–4 months) without benefit.<br>• Stop if no active deficiency or ongoing clinical need. | | • **Stop.** No symptom benefit |
| **Multivitamins** | • **Stop when prescribed for prophylaxis rather than treatment of hypovitaminosis.** | | |
| **Other** | | | |
| **Topical treatments (e.g., moisturisers, ointments, creams, drops, sprays)** | • **Review indication & continue if benefit** | • **Review indication & continue if symptom benefit.** | • **Review.** Continue only if patient still able to use and benefit |
| **Antibacterials (e.g., amoxicillin, piperacillin with tazobactam)** | • **Review indication & continue if for acute symptom benefit.**<br>• Ensure indication, review & stop date are specified.<br>• Considering stopping prophylactic antibiotics. | | • **Review -** Unlikely to be appropriate.<br>• Occasionally required for symptom management at the end of life. |
| **Antifungals (e.g., fluconazole, nystatin)** | • **Review indication & continue if symptom benefit. Ensure indication, review & stop date are specified.** | | • **Review** - Oral thrush - considering continuation as may provide symptom benefit. |
| **Topical non- selective beta-blockers (e.g., timolol, betaxolol, levobunolol)** | • **Review and consider stopping if bradycardia, heart block, heart failure, asthma.** | | • **Stop.** No symptom benefit. |

## Section 5: Documenting Medicines Optimisation Outcomes

**For LTHT patients**

- In **PPM+**, record:
  - The person's priorities (*what matters most*) agreed goals of care and any limits on treatment or monitoring at the top of the review.
  - The note type **"Medicines Optimisation Review"** and for each medicine document the agreed action (continue / optimise / taper / stop), rationale, monitoring plan and date for re-review.
  - Shared decision-making conversations with the person and/or family, to evidence how decisions align with their goals of care.
- In **eMEDs:**
  - Use ***"*medicines optimisation"** as the reason for any medicine changes.
  - Ensure indications, review or stop dates and a clear rationale are documented where relevant.
- On the **eDAN (discharge summary) or clinic letter:**
  - Clearly document any medicine changes (e.g. "stopped as part of medicines optimisation review") and include the rationale for each decision.
  - Highlight where ongoing review or monitoring is required.
- **NHS Discharge Service (DMS):**
  - Where appropriate, the validating pharmacist at discharge should complete a DMS referral in PPM+ to notify the person's nominated community pharmacy.
  - Include key medicine changes and any monitoring or follow-up requirements to support safe transfer of care and continuity of medicines optimisation in the community.

**For primary care patients**

- Document medicines changes, discontinuations and the rationale in the GP record.
- Record shared decision-making conversations with the person and/or family.
- Communicate changes to the patient's nominated community pharmacy (good practice).

## Section 6: Sources of help and advice

If unsure or require advice, please consider contacting:

- The **specialist / senior clinical team** involved in the patient's care.
- **Hospital Specialist Palliative Care Team** (Adult) for adult palliative care patients.
    - Mon to Fri (8am to 5pm): 0113 206 4563
    - Out of Hours (after 5pm) / Weekends:
        - Palliative Medicine Advice (Consultant On-Call) Via SJUH Switchboard:
- **LTHT Pharmacy / Medicines Advisory Service**
    - Mon to Fri (9am to 5pm): 0113 206 5377
    - Out of Hours / Weekends:
        - Pharmacy - On call pharmacist available on bleep contact: 80 1247
- **Primary Care: SPS Medicines Advice Service**
    - Mon to Fri (9am to 5pm): **0300 770 8564**.
    - Email - asksps.nhs@sps.direct

## Section 7: Provenance and Acknowledgement

**Originally adapted by:**
This guidance was originally adapted from the LTHT Specialist Palliative Care Team (SPCT) 'Good Practice Guidance - Deprescribing for Palliative Care Patients 'by the Leeds Oncology Frailty Initiative (LOFrI) and LTHT SPCT and was led by:

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**Development and multidisciplinary input:**
The development of this guidance was informed by the collective expertise of a multidisciplinary group of clinicians, pharmacists and healthcare professionals, including representatives from the following specialties and services:

- Medicines Management and Pharmacy Services
- Cardiology
- Diabetes and Endocrinology
- Elderly Medicine
- Haematology
- Leeds Oncology Frailty Initiative Group
- Neurology
- Nutrition and Intestinal Failure
- Oncology
- Liaison psychiatry
- Palliative Care
- Respiratory Medicine
- Specialist Anticoagulation Services

In addition, specific contributions were provided by:

- Heather Smith, Consultant Pharmacist, NHS West Yorkshire ICB
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**Appendix 1.** Structured Medication Review Checklist. Developed by Leeds Teaching Hospitals NHS Trust. Included as part of: *Medicines Optimisation Guidance for Adult Patients with a Limited Prognosis* (September 2025).

## Appendix 1: Structured Medication Review Checklist

| Step | Action | Tools & Resources |
|---|---|---|
| **1. What matters most?** | • Discuss and record the person's goals, values and priorities (comfort, symptom relief, independence, fewer medicines).<br>• Document clearly in medical notes and care plan.<br>• Use shared decision-making aids to support these conversations *(Appendix 2).* | ReSPECT form<br>Right decisions for health and care |
| **2. Identify essential medicines?** | • Compile a full medication history (prescribed, OTC, and complementary medicines (e.g., herbal, vitamins, supplements).<br>• Document indications, dose, route, formulation, frequency, duration.<br>• Check adherence and administration issues.<br>• Identify medicines critical for symptom control or immediate harm prevention. | WY HCP Managing Medication |
| **3. Stop unnecessary medicines** | • In discussion with the person, identify medicines with no ongoing indication, duplication, or misaligned with goals.<br>• Prioritise deprescribing long-term preventative drugs with no near-term benefit and those with high risk or burden. Decide whether to stop abruptly vs taper.<br>• Communicate the rationale to person and/or carer, and document clearly in the medical notes / prescribing system. | Medstopper<br>Medicines Optimisation Tool (Section 4) |
| **4. Assess risk of harm** | • Review frailty, multimorbidity, renal/liver function, drug-drug/drug-disease interactions.<br>• Consider falls risk, anticholinergic burden, monitoring requirements and cumulative toxicity risk. | Rockwood Clinical Frailty Scale.<br>Anticholinergic burden (ACB) guidance – WY ICS<br>Medicines and Falls Risk<br>Cumulative toxicity tool |
| **5. Assess benefit vs. prognosis** | • Ask whether the indication is still relevant.<br>• Balance expected time to benefit against life expectancy.<br>• Continue medicines with short-term benefit; deprescribe those with only long-term prevention benefit. | Use clinical judgement supported by shared decision-making<br>Medicines Optimisation Tool (Section 4) |
| **6. Optimise necessary medicines** | • Ensure correct drug for the indication, dose, route and formulation.<br>• Simplify regimen (e.g., once daily, patches).<br>• Provide medicines support (compliance aids, carer involvement, reminder charts). | WY HCP Managing Medication<br>Medicines Optimisation Tool (Section 4) |
| **7. Review and follow-up** | • Agree a monitoring and review plan with the person and/ or carers and document in medical notes; ensure coordination with primary/specialist teams.<br>• Monitor for withdrawal, recurrence, or new harms.<br>• Re-instate if needed.<br>• In final weeks-days of life, review more actively, stopping non-beneficial drugs and focusing on comfort. | Local Palliative Care Symptom Management Guidance. |