Scotland polypharmacy recommendations / consultation questions

1. **Delivery of comprehensive 7-steps Medication Reviews**

No.	Our recommendations	Strength of recommendation
1a	A structured medication review by pharmacists in primary care should be conducted at least annually.	Strong recommendation
1b	Pharmacists should consider home visits for house bound individuals to reduce the potential for hoarding of medicines by people living at home.	Strong recommendation
2	Home visits by pharmacists or GPs for house bound individuals may be effective in adjusting treatment plans and improving medication safety.	Conditional recommendation
3	Medication review should be undertaken when a person is discharged from hospital. Medication treatment in a broader sense needs to adjust and align with treatment plans; which will include medication counselling; medication self-management; and securing medication safety.	Strong recommendation
4	Medication review should follow a structured process such as the 7-Steps review process.	Strong recommendation

The following revised case finding criteria are recommended to prioritise individuals for a polypharmacy medication review:

1. Prescribed 10 or more medicines with a high-risk medication (this will identify those from deprived communities where the average age is lower when taking 1 or more medications)
2. Adults aged 50 years and older and resident in a care home, regardless of the number of medicines prescribed
3. Adults aged over 65 years, prioritising those living with frailty or anyone over 75 years
4. Adults of any age, approaching the end of their life or receiving palliative care
5. Those receiving care at home or hospital at home
6. Those on high-risk medication (as defined by the Case Finding indicators), regardless of the number of medications taken

Question 1a

Do you agree or disagree with the recommendations for those with polypharmacy and/or high-risk medicines? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 1b

Do you agree or disagree with the recommendation on who should be targeted for a polypharmacy review? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 1c
Please provide any further comments about our recommendations.

Recommendation 1a

Recommendation 1a states that a structured medication review should be undertaken by a pharmacist at least annually. We would question why this needs to be a pharmacist and not any trained prescriber. While pharmacists are key members of the multiprofessional team, workforce shortages are likely to mean that they are not always available for this task. We would also suggest that it may be of more value for the person conducting this review to be a clinician who knows the patient. This may mean that the review is best carried out by a GP or nurse practitioner.

Recommendation 1b

Home visits as described in recommendation 1b could be carried out by either a pharmacist or a GP rather than just a pharmacist as currently written. This would bring this recommendation in line with recommendation 2. This recommendation refers to 'house bound' people. We would question whether this is the best term. We are not aware of any evidence that suggests that people with limited mobility who are unable to leave their homes are more likely to hoard medications than other groups and it is unclear why they are singled out in this recommendation.

Recommendation 3

A medication review should be undertaken at all transfers of care, including hospital admission, and should not be limited to hospital discharge.

Case finding criteria

We advise removing 'with a high-risk medication' from the first criteria. People taking high-risk medications are covered in item 6 and all patients taking 10 or more medicines should be prioritised for review. Item 3 would include a large proportion of the population and we would suggest that a more targeted approach would be a better use of limited resource.

2. Medication reviews for those receiving care at home and in care homes

No.	Our recommendations	Strength of recommendation
1	Prescribers responsible for those living in care homes could utilise information from different sources, to identify those appropriate for review to reduce polypharmacy, eg, the polypharmacy case finding indicators.	Conditional recommendation

2	Relevant tools can be utilised to prioritise medication review, such as polypharmacy case finding indicators or criteria based on START/STOPP.	Good practice point
3	People in care homes should have a multidisciplinary medicines review on admission and then at least yearly, in particular for potentially inappropriate medications (PIMs) and antipsychotics.	Good practice point
4	Small education group sessions can lead to a decrease in prescribing of a range of medications, including antibiotics, and neuroleptics.	Strong recommendation
5	Care home staff and healthcare professionals (HCPs) should be aware that certain medications can increase the risk of falls and harm caused by falls.	Conditional recommendation
6	Medication Sick Day Guidance should be discussed with care staff so harm can be prevented during an episode of acute dehydrating illness.	Conditional recommendation
7	Shared decision-making (part of 7-Steps process) reflecting the stated wishes of individuals and families, to improve quality of care, is important as part of a medication review.	Strong recommendation

Question 2a

Do you agree or disagree with the recommendations for people receiving care at home and in care homes? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 2b

Please provide any further comments about our recommendations.

Recommendation 1

This recommendation contradicts point 2 in the case finding criteria in the previous section which suggests that all adults aged over 50 living in a care home would be prioritised for medication review.

Recommendation 2

This recommendation refers to START/STOPP – this tool is usually referred to as STOPP/START.

Recommendation 4

This is not phrased as a recommendation but rather is an observation about the usefulness of small education group sessions. We suggest that this be reworded to specifically recommend an educational programme for care home staff.

Recommendation 6

It is unclear whether this recommendation includes avoiding the use of multi-dose administration aids. We suggest clarifying this point.

3. Falls

Our recommendations	Strength of recommendation
Prescribers and medicine users should discuss the benefits and harms of taking medication associated with increased falls as part of a person-centred medication review. (Benzodiazepines, opioids, sedatives, diabetes medication, psychotropics, and antihypertensives are associated with risk of falls).	Conditional recommendation
General practice-based MDT polypharmacy interventions may contribute to falls prevention	Conditional recommendation

No.	Our recommendations	Strength of recommendation
1	A medication review should be considered for those who experience or are at risk of falls. This may include modification / reduction / withdrawal, as part of a multifactorial prevention strategy. People on psychotropic medications should have their medication discontinued if possible to reduce risk of falling.	Strong recommendation
2	Medication reviews to reduce risk of falls should be conducted by a health-care provider with the appropriate knowledge and skills, such as a pharmacist, prescriber, or specialist.	Strong recommendation
3	Medication reviews should be part of a multifactorial risk assessment and individual care plan.	Conditional recommendation
4	A medication review should be undertaken during transitions of care (admission, transfer, discharge), after a fall, when there is a significant change in condition; and when new medications are prescribed, with the aim to monitor medications with side effects known to contribute to risk of falls.	Conditional recommendation

No.	Our recommendations	Strength of recommendation
1	A medicine review undertaken by a pharmacist can have a significant reduction on adverse drug events.	Strong recommendation
2	A medicine review undertaken by a pharmacist may help reduce the risk of falls.	Conditional recommendation

Question 3a

Do you agree or disagree with the recommendations for reviewing people at risk of falls, or who have fallen? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 3b

Do you agree or disagree with the recommendations for reviews to reduce the risk of falls? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 3c

Please provide any further comments about our recommendations.

The point about GP based interventions contributing to falls prevention is an observation, rather than a recommendation. We suggest that this is reworded to specify that these interventions should be encouraged in order to prevent falls.

This section should include a point about checking standing and lying blood pressure as part of a falls assessment in order to aid a medication review.

Recommendation 1

This recommendation needs clarifying to avoid those who are taking psychotropics appropriately being targeted. The wording should be changed to read "people on psychotropic medications which no longer provide clinical benefit or are causing harm, should have their medication discontinued."

We would also question why this recommendation focuses on psychotropic medications and not all medications that increase the risk of falls.

Recommendation 2

It is unnecessary to list all of the professionals who might conduct a review – changes would need to be enacted by a prescriber. Therefore, it is sufficient to specify prescriber.

Recommendation 3

This recommendation seems at odds with the previous recommendation. Medication reviews to reduce falls should be undertaken as part of a multidisciplinary clinical falls assessment.

Recommendation 4

We would suggest that in addition to ‘change in condition’, ‘change in clinical frailty status’ should be added to this recommendation.

Recommendations 1 and 2

These recommendations specify a pharmacist when this task can be undertaken by any prescriber.

4. Managing frailty

No.	Our recommendations	Strength of recommendation
1a	**Medication review to identify medication-related problems in those receiving care at home.** Healthcare professionals (HCP) and people over 65 years with frailty might want to discuss the importance of a medication review at least annually (regardless of the level of frailty).	Good practice point
1b	HCPs and people over 65 years with frailty might want to discuss the importance of the investigation of falls in the last 12 months.	Good practice point
2a	**Person-centred medication review that recommends stopping inappropriate medication** HCPs and people over 65 years with frailty might want to discuss the 7-Steps process; including reviewing the medication of all older people for the purpose of potentially discontinuing, particularly in those vulnerable to adverse effects.	Conditional recommendation
2b	Prescribers should ensure there is a valid clinical indication for current medication, and consider deprescribing corresponding medicines, where appropriate.	Good practice point
2c	Prescribers and older people with frailty should discuss reducing or stopping a medication that is no longer clinical appropriate or has more harms than benefits.	Conditional recommendation
2d	Prescribers should consider discontinuing medication when appropriate, where there is a narrow window of benefit and evidence or potential harms, especially for sedative and antipsychotic medications.	Good practice point
2e	Prescribers should follow the 7-Steps process to undertake holistic medication reviews	Strong recommendation
3	**Multidimensional interventions** Medication review may identify the need for additional medications. It is important to take a person-centred approach to ensure that medicines that are needed for symptomatic control or prevention are considered where appropriate.	Good practice point

Diabetes

No.	Our recommendations	Strength of recommendation
1	Healthcare professionals (HCP) and older people with frailty might want to discuss the following regarding diabetes medications: Strict avoidance of both hypoglycaemia (defined as <4.0 mmol/L) and osmotic symptoms (usually seen when glucose levels are greater than 15mmol/L) should be a major goal of care for the frail older inpatient.	Good practice point
2	A higher glucose range should be considered by the care team in people with moderate to severe frailty or those with limited life expectancy.	Good practice point
3	The need for glycaemic control to be less rigid for frail older adults with chronic kidney disease: an HbA1c range of 59-69mmol/mol (7.5-8.5%), due to an increased risk of hypoglycaemia. Avoid tight glycaemic control (HbA1c <42mmol/mol (6%)).	Good practice point
4	Higher HbA1c of >69 mmol/mol (>8.5%) has been shown to be independently associated with poor muscle quality, which may lead to sarcopenia.	Good practice point
5	To review medication regimen post discharge, at home, or in a care facility.	Good practice point

Hypertension

No.	Our recommendations	Strength of recommendation
1	Antihypertensive medications can reduce the risk of mortality, stroke, and heart failure in older adults. Because biological rather than chronological age can determine tolerability of, and likely benefit from medications, these individuals should not be denied treatment, or have it withdrawn simply on the basis of their chronological age. A person-centred approach should be considered.	Good practice point
2	Prescribers and people over 65 years of age with frailty might want to discuss the tolerability of, and benefits from, antihypertensive medication taking into consideration a person's level of frailty, and independence.	Good practice point
3	A general treatment target of systolic blood pressure (SBP) below 140 mmHg, and diastolic blood pressure (DBP) below 90 mmHg is recommended for adults under 80 years with or without T2DM. For those over 65 years of age with frailty, this might not be achievable.	Conditional recommendation

	While a higher targets is acceptable, if lower blood pressure is sought, a slower timeline for reductions will be required in frail old or very old patients; it is important to recognise that this might not be achievable.	
4	BP targets should be balanced with the greater risk of harms, falls and acute kidney injury.	Good practice point.

Lipids

No.	Our recommendations	Strength of recommendation
1	Prescribers and older people with frailty might want to discuss reducing or stopping a statin because the evidence does not indicate: - Reduction in morbidity/mortality in primary prevention - A change in the frequency of admission to long-term care, or reduced frequency of admission to hospital.	Good practice point
2	Prescribers and older people with frailty may wish to discuss what effect taking a statin has on treatment burden, or quality of life. Within the polypharmacy manage medicines app prescribers and patients may wish to use shared decision-making tools, such as NNT charts or gates plots to help visualise potential magnitude of benefit of medication for this intervention.	Good practice point

Depression or dementia

No.	Our recommendations	Strength of recommendation
1	Antidepressants should only be started if non-pharmacological interventions are insufficient due to lack of evidence of benefit and increased side effects.	Conditional recommendation
2	If antidepressants are started for frail older adults over 65 years, the person should be reassessed after 8-12 weeks due to lack of evidence of benefit and increase risk of side effects	Conditional recommendation
3	Prescribers and people over 65 years with frailty and Alzheimer's dementia should discuss the benefits of taking AChEIs (fewer deaths and cognitive benefits), compared to the risk of adverse GI and neurological effects (agitation, temor, confusion, depression, aggression, vertigo, abnormal gait, dizziness)	Conditional recommendation

4	The risks and benefits of deprescribing AChEIs for Alzheimer's dementia should be considered carefully. Stopping established treatment may lead to loss of cognition or function which may not be regained if the medication is restarted.	Conditional recommendation
5.	Prescribers and people over 65 with frailty should balance the limited benefits of prescribing anticonvulsants for agitation and aggressive behaviour in people with Alzheimer's disease against the considerable neurological adverse effects (agitation, tremor, confusion, depression, aggression, vertigo, abnormal gait, dizziness). The evidence for the use of anticonvulsants to reduce agitation and aggressive behaviour in people with Alzheimer's disease is limited.	Conditional recommendation
6	Prescribers and people over 65 years with frailty should be cautious when considering the prescription of antipsychotic medication for stress and distress in dementia. They have a considerable number of adverse effects, particularly neurological, cardiovascular and metabolic. There is an increased risk of death for those over 65 years on these medications. The evidence for the use of antipsychotic medication in stress and distress in dementia is limited.	Conditional recommendation
7	People taking antidepressants, anticonvulsants or antipsychotics should have the prescribing of these medications reviewed regularly.	Conditional recommendation

Question 4a

Do you agree or disagree with the recommendations for managing frailty? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 4b

Please provide any further comments about our recommendations.

General comment

The document refers to degrees of frailty (eg, mild, moderate, severe) but the recommendations are binary (frail or non-frail). Failure to distinguish between degrees of frailty in the recommendations reduces the value of the recommendations.

Managing frailty – recommendation 1a

It is important to note that frailty is a controversial topic in people aged under 65 – the Clinical Frailty Scale is not validated in this age group. As such, it is unlikely that that this recommendation would be applicable to anyone aged under 65. In addition, a more targeted approach for people living with frailty may be a more appropriate use of

resources, rather than screening everyone with any degree of frailty. We would also suggest strengthening the language of this recommendation to 'should discuss' rather than 'may wish to discuss.'

Managing frailty – recommendation 1b

This recommendation should specify that it is about medicine-related falls rather than general falls. We suggest clarifying this by changing the wording to 'investigation of falls related to their medication.'

Managing frailty – recommendation 2b

'Corresponding medicines' should be changed to 'inappropriately prescribed medicines' to ensure that there is no confusion. In addition, this recommendation should be a strong recommendation, rather than a good practice point.

Managing frailty – recommendation 2e

This recommendation should specify that the 7-step process should incorporate shared decision making with the patient and/or family or next of kin. This recommendation states that 'prescribers should follow' the 7-step process. However, recommendation 2a uses the phrase 'might want to discuss' the same process. We suggest that the language in recommendation 2a should be strengthened to retain consistency across the recommendations.

Managing frailty – recommendation 3

We suggest that the need for a monitoring and review plan is added to this recommendation.

Diabetes – recommendation 1

A glucose level of <4.0 is very low and there is no clinical benefit of lowering the level below a minimum of 6.0 and possibly higher. Lowering the glucose level this much risks hypoglycaemia. We suggest a more lenient target for this recommendation.

Diabetes – recommendation 2

We would suggest that the targets in this recommendation be matched with Clinical Frailty Scale scores to assist with understanding.

Diabetes – recommendation 3

It is unclear why there is a more lenient target for people with chronic renal impairment and not for numerous other conditions that carry a higher risk of hypoglycaemia such as frailty, dementia, cardiovascular disease and alcohol dependency. In addition, it is redundant to specify 'avoid HbA1c <42mmol/mol' when the target is 59-69mmol/mol.

This should be ‘Avoid HbA1c <59mmol/mol’. We would also suggest removing the percentage figures as these figures are now reported in mmol/mol only.

Diabetes – recommendation 4

The association between higher HbA1c and poor muscle quality is not very informative. If it is necessary to include this detail, a specific reference to the evidence base should be included.

Diabetes – recommendation 5

More detail could be added to this recommendation to elaborate on why medication changes might be necessary in different circumstances. This could be because of a changed physiological response, eg, during sepsis, or alterations in medication adherence in different care settings.

Hypertension – recommendation 1

This section should include definitions of frailty by severity. Antihypertensive medications have not been shown to improve outcomes for people with frailty. As such, what may be suitable for someone with mild frailty may be inappropriate for severe frailty. In addition, the explanation regarding biological and chronological age seems self-evident in a section discussing people with frailty. This could perhaps be omitted or stated in the introduction to the frailty section.

Hypertension – recommendation 2

We would suggest that this recommendation be strengthened by replacing ‘might want to’ with ‘should’. This point should also include personal goals as a factor. ‘Risk of postural hypotension’ should also be considered alongside frailty and independence.

Hypertension – recommendation 3

If targets are to be specified in this section, it would be helpful to add the target for patients aged over 80 which is <150/90, as recommended by NICE.

However, it is important to note that <140/90 mmHg is not an evidence-based targets for people with frailty and the NICE guidelines recommend that clinicians should use their judgement. A much more lenient target (depending on degree of frailty) would be less likely to lead to polypharmacy and medication-related harm. There also needs to be a lower limit to avoid over-treatment, ie, deprescribing advised if systolic BP is under a certain level. There should also be caution about orthostatic hypotension, white-coat effects and the need for a series of measurements.

In the second sentence of this recommendation, we would suggest that ‘this might not be achievable’ should be replaced with ‘the harm may outweigh the benefits.’

Hypertension – recommendation 4

This recommendation requires practical advice to be provided. It would be useful to specify how blood pressure targets should be balanced and if there is a recommendation for a more lenient target.

Lipids – recommendation 1

This recommendation is very vague and does not provide practical guidance for people using shared decision-making. It is important that risk of harm is mentioned in this section.

Lipids – recommendation 2

This recommendation includes a typo – it should be Cates plots, not gates plots.

It is important to note that NNT charts are based on data from trials that excluded most people with frailty and therefore may not be applicable to this population. In addition, limited life expectancy makes 10-year cardiovascular risk assessments less relevant.

It would also be helpful to add a link to the app referred to in this recommendation.

Depression or dementia – recommendation 1

The wording here should be altered to 'lower probability of benefit' instead of 'lack of evidence of benefit.' The wording currently implies that medication should be prescribed even if there is no evidence of efficacy.

Depression or dementia – recommendation 2

It would be helpful to know the evidence behind this recommendation. We would specifically question the time period specified of 8 to 12 weeks as the prior text suggests 2 to 4 weeks. Perhaps a mid-point of 4 to 8 weeks would be preferable. The text from recommendation 1 does not need to be repeated here. We would suggest that the wording be amended to read 'If antidepressants are started for older adults with frailty, the person should be reassessed after 4-8 weeks to ensure a symptomatic benefit has been achieved without experiencing significant adverse effects.'

Depression or dementia – recommendation 3

We would question the statement that AChEIs result in fewer deaths. There is limited evidence that AChEIs improve survival. This claim appears to be based on two small studies, neither of which had this as a primary outcome [Burns et al 2009 n = 407; Tariot et al 2005 n = 208]. This is a flimsy statistical basis and, as such, we advise concentrating on primary outcomes, ie, a small improvement in cognition but no change in functional measures.

Depression or dementia – recommendation 4

AChEIs do not have a disease-modifying effect and, as such, we question the claim that deprescribing these medications would lead to irreversible harm. If this statement is crucial to include, evidence should be included as a reference.

Depression or dementia – recommendation 5

The evidence base for prescribing anticonvulsants for this indication is extremely weak and we question whether they are commonly prescribed for this purpose. A recommendation to avoid or deprescribe seems more appropriate.

Depression or dementia – recommendation 6

In this context, 'stress' and 'distress' are the same thing. It would be more beneficial to state the specific indications with (limited) evidence, ie, psychosis and aggression. It would also be worth adding a period for review, eg, every four weeks to ensure ongoing benefit with trial withdrawal if uncertain.

5. Anticholinergic burden

No.	Our recommendations	Strength of recommendation
1	Prescribers should practice caution when prescribing medicines with ACB, prescribing only the minimum needed, especially for older adults, people with frailty, or people with complex multimorbidities. This is due to the association between ACB and mortality and increased risk of cognitive impairment, dementia and delirium.	Strong recommendation
2	A person-centred approach should be taken when assessing the impact of harm of anticholinergic medication and the benefits when discontinuing anticholinergic drugs.	Strong recommendation
3	Prescribers should carefully consider if the benefits of prescribing a drug with ACB are greater than the risks	Conditional recommendation
4	Prescribers might want to consider minimising prescribing of drugs with ACB as part of assessment of falls risk for those people with the highest level of ACB (eg ACB ≥4), which might be indicative of the greatest risk of falls.	Conditional recommendation
5.	There is some evidence that a pharmacist undertaking patient medication review and then feeding back to the prescriber can lead to a significant reduction in ACB.	Conditional recommendation
6	In patients with dementia, perform a medication review to minimise medicines that may adversely affect cognitive function. Avoid prescribing of anticholinergics with acetylcholinesterase inhibitors. As part of the	Strong recommendation

	review, a MMSE may be helpful to assess impact of medication.	

Question 5a

Do you agree or disagree with the recommendations for managing medicines with anticholinergic burden? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 5b
Please provide any further comments about our recommendations.

Recommendation 4

An ACB score of ≥3 is noted as significant risk of harm, according the the ACB calculator. We suggest amending this.

Recommendation 5

We suggest rewording this recommendation to acknowledge that many pharmacists are also prescribers.

Recommendation 6

MMSE is not commonly used. We suggest amending this to 'monitor cognition' or MOCA.

6. **Long-term conditions: Chronic pain, Diabetes**

Chronic pain

Chronic pain, also called persistent pain, is defined as persistent or recurring pain that lasts longer than three months despite medication or treatment and is a recognised long-term condition.

- People living with pain need to be supported and empowered to manage their pain, considering non-pharmaceutical options in the first instance.
- Individuals should have access to personalised information and support with an awareness that chronic pain is a long-term condition. The goal is increased function and improved quality of life.
- Healthcare professionals and individuals should have honest conversations about the role of medication in the management of chronic pain, regarding efficacy, dependency and possible withdrawal.
- Opioids should only be considered for short to medium-term treatment (less than three months) for carefully selected individuals with chronic non-malignant pain, when other therapies have been insufficient and the benefits are greater than the risks of serious harms.

- Antidepressants and gabapentinoids can be considered depending on the indication but the risk of adverse effects must be considered against the benefits (eg, numbers needed to harm versus numbers needed to treat).
- Regularly review medication, and discuss withdrawing medication if appropriate.
- Those suffering chronic pain with co-existing depressions should have their antidepressant therapy optimised, rather than adding a subsequent antidepressant medication.
- Individuals who cannot stop their medication should be encouraged to reduce to the lowest effective dose.

Diabetes

Management of type 2 diabetes mellitus (T2DM) can reduce symptoms of hyperglycaemia and reduce long-term complications. The aim of this hot topic is to ensure that these are prescribed safely.

- Lifestyle management is the fundamental aspect of diabetes care.
- Consider co-morbidities, such as atherosclerotic cardiovascular disease, chronic heart failure and chronic kidney disease, and prescribe SGLT-2 inhibitors and GLP-1 receptor agonist, where appropriate, to improve long-term outcomes.
- In frailty, diabetic control should be individualised to reduce the risk of hypoglycaemia.

Question 6a
Do you agree or disagree with the recommendations for management of chronic pain? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 6b
Please provide any further comments about our recommendations.

We recommend that it is specified in point 3 that the honest conversations should avoid the use of the word ‘painkiller’ as this implies that pain will be completely removed which is not always possible.

Question 6c
Do you agree or disagree with the recommendations for management of type 2 diabetes? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 6d
Please provide any further comments about our recommendations.

We would question whether the phrase ‘hot topic’ is suitable for a clinical guideline and suggest rewording this.

The point about lifestyle management should include details about monitoring weight, renal function and HBA1C to review therapy.

When discussing SGLT-2 inhibitors, sick day rules must also be discussed. We suggest adding this.

A point should be added about avoiding sulfonylureas to prevent hypoglycaemia.

7. **Parkinson's Disease, Dementia**

Parkinson's Disease

Antiparkinsonian medicines are essential medicines for treating the motor complications of Parkinson's Disease (PD). For most people with PD, medication is the only way to control their symptoms.

- Liaise with the PD specialist if changes to antiparkinsonian medication are needed.
- Medication should be taken at specific times to ensure that the control of symptoms is maintained with deterioration. Delay of medication can result in someone being unable to function independently at work or at home, and becoming reliant on others for simple everyday activities such as walking and eating.
- Individuals should be asked about non-motor symptoms which might be impacting on their quality of life.

Dementia

Dementia is a progressive neurological condition that is current irreversible.

This hot topic considers the appropriateness of therapy (acetylcholinesterase inhibitors and memantine) to manage dementia.

- A thorough clinical assessment including delirium screening should be completed if there is increasing confusion, hallucinations, stress and distress behaviours.
- Review and consider environmental, social, physical and medication changes and other stressors such as acute intercurrent illness, pain, constipation. Include a review of all medicines with anticholinergic effects. Any changes or causes should be managed prior to initiating medication.
- Review medication after initiation, considering perceived benefit/stability and severity of side effects, including bradycardia or gastrointestinal side effects.

- Be aware that stopping established treatment may lead to loss of cognition or function which may not be regained if the medication is restarted. Carefully consider the risks and benefits of deprescribing.

Question 7a
Do you agree or disagree with the recommendations for management of Parkinson's disease? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 7b
Please provide any further comments about our recommendations.

Page 311 of the guidance links to the OPTIMAL calculator for advice on switching Parkinson's medications at the end of life. However, the link to the calculator goes to a webpage that explains that the calculator is being retired. The alternative is PDMedCalc, available at www.pdmedcalc.co.uk, however caution should be taken regarding dose of patch given for patients with delirium.

While the point about non-motor symptoms that are impacting on a patient's quality of life is accurate, it is unclear why it is included in a guideline on polypharmacy.

Question 7c
Do you agree or disagree with the recommendations for management dementia? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 7d

Please provide any further comments about our recommendations.

We would again suggest that 'hot topic' is not an appropriate phrase for a clinical guideline.

8. **Mental health drugs: Antidepressants, Benzodiazepines, Antipsychotics**

Antidepressants

- For mild depressive illness, the risk-benefit ratio is poor for mild depression, therefore consider non-pharmacological options.
- A trial of antidepressant treatment may be appropriate for people with:
    - A history of moderate or severe depression
    - Initial presentation of sub-threshold depressive symptoms existing over a long period (typically at least two years)
    - sub-threshold depressive symptoms or mild depression that persists after other interventions
- For moderate to severe depressive illness the use of antidepressants in combination with psychological therapies is more effective, with lower discontinuation rates than people with antidepressants alone.

- For people who are at significant risk of relapse, or have a history of recurrent depression, discuss treatments to reduce the risk of recurrence, such as continuing medication, augmentation or medication or psychological treatment.
- Non-pharmacological management of symptoms of stress and distress in dementia should be considered and implemented as first line approaches.
- In anxiety: consider non-pharmacological options as the effectiveness of antidepressants in mild anxiety disorders is uncertain.
- Review antidepressant use regularly and consider reducing or stopping, if appropriate. This should be done gradually.

Benzodiazepines and z-drugs

These are considered non-essential medicines in most cases:

z-drugs: long-term use (more than four weeks) in insomnia

benzodiazepines: long-term use (more than four weeks) in insomnia, anxiety and back pain.

- For insomnia, prior to starting, discuss the potential underlying causes and the use of non-pharmacological options.
- B-Z may be effective for the short-term treatment of insomnia, and/or anxiety disorders but use should be limited to less than two weeks on an 'as required' basis.
- In anxiety disorders, there are limited indications for the use of benzodiazepines, with increased risk of adverse effects.
- Practitioners should proactively review benzodiazepine use and need when individuals are stable and well, with a focus on higher risk groups of people.
- For those who do not or cannot reduce/stop schedule more frequent reviews to detect and manage problems.

Antipsychotics

Antipsychotic prescribing should be appropriate and safe, and any withdrawal/reduction is tailored to the individual and their circumstances.

- Potentially non-essential indications:
    - Anxiety and/or psychomotor agitation
    - Symptoms of stress and distress in dementia (SSDD)
    - Delirium
- If antipsychotics are required:
    - Discuss the evidence base of antipsychotic use
    - Agree the therapeutic objectives, balancing benefits and risks of treatment

    - use the lowest effective dose for the shortest time-period, except in life-long psychotic illness.
- Regularly monitor efficacy and safety or treatment, eg, for SSDD in care homes.

Question 8a
Do you agree or disagree with the recommendations for antidepressants? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 8b
Please provide any further comments about our recommendations.

The point about deprescribing antidepressants is quite vague. We suggest adding guidance about when to stop once depression is managed and how to stop (hyperbolic tapering with the pace of discontinuation guided by the patient).

Question 8c
Do you agree or disagree with the recommendations for benzodiazepines? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 8d
Please provide any further comments about our recommendations.

These recommendations should include guidance about sleep hygiene advice and CBT-i as a first line treatment.

Question 8e
Do you agree or disagree with the recommendations for antipsychotics? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 8f
Please provide any further comments about our recommendations.

We would suggest removal of the word ‘safe’ in the first point as safety can never be assumed. Antipsychotics carry a risk of stroke, sudden death and aspiration pneumonia.

The ‘potentially non-essential' indications are definitely non-essential. There is very little evidence of benefit in these indications and a high risk of harm.

The acronym SSDD is not widely used and our clinical experts had not come across it before. BPSD (Behavioural and Psychological Symptoms in Dementia) is more widely used.

We would suggest that the sentence ‘If antipsychotics are required…’ be changed to ‘If antipsychotics are prescribed…’

We would suggest that a time period be stated for the regular review of treatment. NICE recommends 6-weekly.

9. Antibiotics and penicillin allergy

Antibiotics

The decision to start or not start antibiotic therapy, requires careful consideration as there are potential side-effects, which may add to the symptom burden at end-of-life.

- Antibiotics may be indicated to relieve symptoms or potentially cure an infection at the end-of-life.
- Risks and benefits should be considered including when treatment would require hospitalisation.

Penicillin allergy

Approximately 10% of people identify as having a penicillin allergy, however true penicillin allergy is estimated to affect only one percent of the population.

- It is essential that individuals who have a potentially incorrect penicillin allergy label are fully assessed to confirm if they are truly allergic or not.
- For people who do not have a true penicillin allergy, it may be possible to consider supervised penicillin allergy de-labelling (PADL) oral challenge. PADL may be undertaken in a hospital setting after careful assessment of risk.

Question 9a
Do you agree or disagree with the recommendations for antibiotic use at the end of life?
(Agree / Neither agree nor disagree / Disagree / Not sure)

Question 9b
Please provide any further comments about our recommendations.

It appears that this section is actually about antibiotic use at the end of life. If this is intended to be the case, this should be made clear in the title.

We would question the first point about the decision to start or not start antibiotics. If a person has an infection, there is usually no question about whether or not to treat it, unless the person is at end of life.

The beginning of this section should detail the appropriate choice of antibiotic in older people, using cultures to focus treatment as well as other principles of antibiotic stewardship.

The risks and benefits of treatment should inform part of advance care planning before an individual becomes unwell and we advise that this should be added to this recommendation.

Question 9c
Do you agree or disagree with the recommendations for managing penicillin allergies? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 9d
Please provide any further comments about our recommendations.

We would question whether PADL oral challenge would be appropriate for older people with frailty.

10. High-risk combinations and Medication Sick Day Guidance

High-risk combinations

Gastrointestinal (GI) bleeding, concomitant use of NSAIDs and SSRIs

This considers the impact of prescribing a non-steroidal anti-inflammatory drug (NSAID) and a selective serotonin re-uptake inhibitor (SSRI) at the same time and the increased risk of GP bleeding if these are taken together.

- Where possible, the NSAID should be stopped. If an NSAID is essential, then the shortest possible course should be used.
- GI protection with a proton pump inhibitor (PPI) may need to be considered, especially in older adults, who are at greater risk of SSRI-associated bleeding, or those with a history of GI bleed.
- Antidepressants should be regularly reviewed.
- Encourage non-pharmacological approaches for depression/anxiety and physical activity for both depression and joint pain.

Use of combination blood thinners

Blood thinning treatment is widely used as an effective therapy to lower the risk of a range of events.

- Indication and duration should be clear both at commencing treatment and with continuing use.
- Managing bleeding risk
    - Ensure that bleeding risk is not increased by co-prescription of agents that increase risk of bleeding.
    - Consider use of gastroprotection.
- If a blood thinning agent is no longer indicated or safe, it should be stopped.
- If gastroprotection was started to reduce the risk of bleeding with a blood thinner and that blood thinner is then stopped, consider stopping gastroprotection.

Acute kidney injury

This considers the impact of the triple whammy where any three of metformin, an ACEI (angiotensin-converting enzyme inhibitor), ARB (angiotensin II receptor blocker), NSAID (non-steroidal anti-inflammatory drug) and a diuretic are prescribed.

- Where possible, NSAIDs should be stopped. If an NSAID is essential, then the shorted possible course should be used, and renal function reassessed regularly.
- Discuss Medication Sick Day Guidance.

Concomitant use of any three of opioids, benzodiazepines, z-drugs, gabapentinoids or antidepressants

This hot topic considers the concurrent prescribing of any three of: opioids; benzodiazepines; z-drugs; gabapentinoids or antidepressants. This increases sedation, falls, severe respiratory depression, the potential for dependency and possible withdrawal reactions when these medications are stopped.

- The risk of harm increases with the number of these medicines taken concurrently. There should be assessment of risk factors such as history of problematic substance/alcohol use.
- Pharmacological and non-pharmacological approaches should be considered as treatment options and reviewed regularly for effectiveness.
- Where possible, when used for non-essential use, these medicines should be stopped.
- Reduction of therapy should be controlled, not sudden, to manage the risk of withdrawal symptoms.
- Only co-prescribe benzodiazepines with opioids if there is no alternative and, if necessary, the lowest possible doses should be given for the shortest duration.
- Monitor individuals closely for signs of respiratory depression at initiation of treatment and when there is any change in prescribing, such as dose adjustments of new interactions.

Medication Sick Day Guidance

The aim of the Medication Sick Day Guidance is to prevent such adverse events by temporarily withholding medication during episodes of acute dehydrating illness and restarting once the individual is well.

- Medication Sick Day Guidance may be appropriate for those taking one or more of the following medicines:
    - Sulfonylureas or sodium-glucose co-transporter-2 (SGLT-2) inhibitors
    - Angiotensin-converting enzyme (ACE_ inhibitors)
    - Diuretics
    - Metformin

    - Angiotensin receptor blockers (ARB)
    - Non-steroidal anti-inflammatory drugs (NSAID)
- A person-centred approach should be used with the Medication Sick Day Guidance. Prior to provision, consider the individual's risks and benefits of following the Medication Sick Day Guidance, as the guidance may not be suitable for some individuals.

Question 10a
Do you agree or disagree with the recommendations for management of high-risk combinations of medicines? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 10b
Please provide any further comments about our recommendations.

GI bleeding

In the first point, 'lowest effective does' should be added to 'shortest possible course.'

A proton pump inhibitor is not always appropriate due to low Na or Mg levels, and the increased risk of osteoporosis. H2A antagonist should be offered as an alternative. The point should also specify that the lowest appropriate dose should be given.

Use of combination blood thinners

It should be noted that 'blood thinners' is not a medical term and is used as lay language when speaking with patients. These medications should be referred to as antiplatelets or anticoagulants.

The phrase 'range of events' should be replaced with 'adverse cardiovascular events'.

In the final point, if the treatment was only started due to antiplatelet then it should be stopped, rather than consider stopping.

Acute kidney injury

We would question whether the phrase 'triple whammy' is appopriate in a clinical guideline.

Concomitant use of any three of opioids, benzodiazepines, z-drugs, gabapentinoids or antidepressants

In the third point, the phrase 'when used for non-essential use' needs clarifying. We suggest that this should be replaced by 'used inappropriately' or 'when risk of harm outweighs benefit.'

In the fourth point, it should be specified that the controlled reduction of therapy should be conducted in a hyperbolic tapering manner, led by the patient.

Question 10c
Do you agree or disagree with the recommendations in the Medication Sick Day Guidance? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 10d
Please provide any further comments about our recommendations.

It would be useful to add a bullet point here about exercising caution in the use of administration aids that contain these medications as multi-dose administration aids have limitations.

The first sentence specifies 'acute dehydrating illness'. However there are many other scenarios that should be considered here such as laxatives during diarrhoeal illness.

In the first point, it should be noted that guidance should be provided at the point of prescribing to the patient and/or the carer. The guidance should also include advice about periods of hot weather which are more common as the climate continues to change.

11. Constipation

Constipation is typically defined as bowel motions less than three times a week. Constipation is a common symptom and can be short term or chronic, if lasting tree months or more.

- Provide information on first line evidence based dietary advice
- Many medicines are implicated in inducing constipation, including those with high anticholinergic burden. Such medication should be reviewed and stopped or reduced where appropriate.
- People prescribed multiple laxatives should be reviewed.
- Education is key in helping individuals understand why multiple laxatives are not recommended long-term
- Consider step-wise approach to reducing/stopping laxatives.

Question 11a
Do you agree or disagree with the recommendations for management of constipation? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 11b
Please provide any further comments about our recommendations.

The first point should also include information about movement and walking.

It should be mentioned that there is limited evidence for the use of sodium docusate.

12. Osteoporosis

This hot topic considers the appropriateness of antiresorptive therapy (eg bisphosphonates, denosumab) including duration of treatment to reduce fracture risk in the management of osteoporosis.

- Consider likely life expectancy/prognosis when deciding whether to prescribe bisphosphonates for postmenopausal women with osteoporosis, therapy is most likely to benefit those who have a life expectancy greater than 12.4 months.
- Low-to-moderate risk patients who are stable after five years of taking oral bisphosphonates or, after three years with intravenous zoledronic acid, may be considered for a 'drug holiday'
- Individuals taking prednisolone 7.5mg daily for three months or more should be offered antiresorptive treatment. This includes those taking repeated short courses prednisolone (three or more in 12 months).

Question 12a
Do you agree or disagree with the recommendations for management of osteoporosis? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 12b
Please provide any further comments about our recommendations.

It should be specified that fracture risk should be calculated using FRAX or FRAXplus.

We feel that it is unnecessary to specify the life expectancy of 12.4 months – this should be simplified to 'one year'.

The phrase 'patients who are stable' needs to be clarified as it is not clear whether this means patients who have not experienced a fracture.

The phrase 'drug holiday' is too simplistic to match the current NOGG guidance which provides a high level of detail about this. This should be amended to ensure that they match.

13. Deprescribing in palliative care

In palliative care, the focus is on reducing medication burden and promoting person-centres discussions to enhance quality of life, adherence with essential medicines, and reduce the risk of adverse drug effects.

- Medication reviews should be undertaken regularly to meet the changing needs of the individual, and to reduce potential harm from previously well tolerated medicines. Consider factors such as age, frailty, comorbidities, altered organ function and the number and types of medication taken. Deprescribing of medicines should be considered where appropriate.
- It is appropriate to consider deprescribing in the following individuals:

- With malignant prognosis of six months of less as per OncPal guideline inclusion criteria.
- With chronic ill health who meet criteria outlined by the Supportive and Palliative Care Indicator Tool (SPICT), suggesting they are in the last 6-12 months of life.
- With a suspected prognosis of 6-12 months or less and Clinical Frailty Score 8-9, (based on expert opinion)

Question 13a

Do you agree or disagree with the recommendations for deprescribing in palliative care? (Agree / Neither agree nor disagree / Disagree / Not sure)

Question 13b

Please provide any further comments about our recommendations.

14. Further comments

Question 14

Please provide any further comments on our polypharmacy guidance.