

Polypharmacy: Guidance for Prescribing in Frail Adults

Why is reviewing polypharmacy important?

Medication is by far the most common form of medical intervention. Four out of five people aged over 75 years take a prescription medicine and 36 % are taking four or more.¹ However, it is suggested that up to 50 % of drugs are not taken as prescribed. Many drugs in common use can cause problems and adverse reactions to medicines are implicated in 5 - 17 % of hospital admissions². Research has demonstrated that patients on multiple medications are more likely to suffer drug side effects. This is more related to the number of co-morbidities a patient has than age². There is a clear and steady increase in the number of patients admitted to hospital with drug side effects³. Patients admitted with one drug side effect are more than twice as likely to be admitted with another³. This can lead to a situation where adults may be suffering side effects (that may even lead to hospital admission) from drugs that they derive little or no benefit from, or where the harm of the drug outweighs any possible benefit.

These guidelines aim to provide guidance on how to make a safe and sensible decision in situations where extra thought and considerations are needed.

Patient groups include:

1. Patients who are taking a large number of medications (polypharmacy)

- **Drug review process** - A review should be conducted holistically by considering each medication and its impact on the individual clinical circumstances of the patient. As part of this it is important to consider the cumulative effects of each medication. It is essential to ensure that the patient is capable of taking the medicine and that compliance is satisfactory. The “NO TEARS” tool can be used to simplify and aid the review process.
- **High risk medication** - Medications that are most likely to cause significant harm to the patient should be reviewed

2. Patients with indications of shortened life expectancy (where life expectancy is shorter than the time that medication would take to give significant effect)

- It is important to identify these patients and to consider the expected benefits of the medication prescribed. Should they be included on the palliative care register?

3. ‘Frail’ and elderly patients

- Frail elderly patients appear to be particularly at risk of ADRs and this group are also likely to be receiving several medicines

The NO TEARS tool⁴

- **Need and indication**
- **Open questions**
- **Tests and monitoring**
- **Evidence and guidelines**
- **Adverse events**
- **Risk reduction or prevention**
- **Simplification and switches**

Status: Issue 1

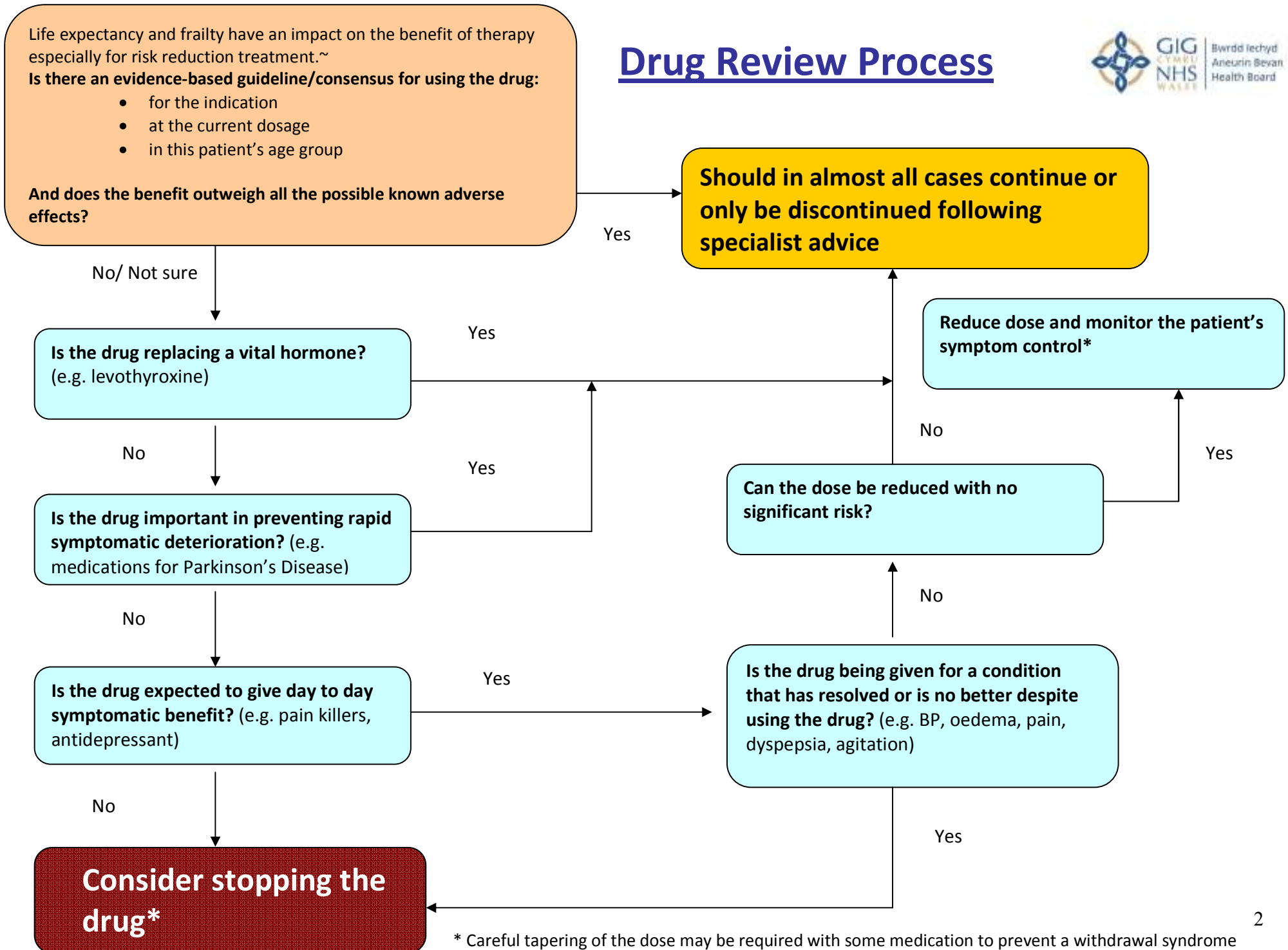
Approved by: MTC

Owner: Emyr Jones (Emyr.Jones3@wales.nhs.uk)

Issue date: May 2013

Review date: May 2016

Drug Review Process



* Careful tapering of the dose may be required with some medication to prevent a withdrawal syndrome
 ~ This may be a prompt to consider inclusion on the palliative care register in certain patients

Medication most associated with admission due to adverse drug reaction

In a 2004 UK study the most common drug groups associated with admission due to adverse drug reaction ('ADR') were:

1. NSAIDs 29.6%
2. Diuretics 27.3%
3. Warfarin 10.5%
4. ACE inhibitors 7.7%
5. Antidepressants 7.1%
6. Beta blockers 6.8%
7. Opiates 6.0%
8. Digoxin 2.9%
9. Prednisolone 2.5%
10. Clopidogrel 2.4%

Drugs That Can Be Associated With Rapid Symptomatic Decline If Stopped Or Require Cautious Stepwise Withdrawal

Drugs in this group may require specialist advice.

- ACE inhibitors in heart failure [left ventricular impairment].
- Diuretics in heart failure.
- Drugs for heart rate or rhythm control [beta blockers; digoxin].
- Opioids/ Antidepressants / Antipsychotics / Antiepileptics / Clonidine / Baclofen/ Corticosteroids/ Benzodiazepines

Drugs and Dehydration

It may be indicated to **WITHOLD** the following in patients diagnosed with severe dehydration (e.g. those suffering from more than just minor vomiting/diarrhoea):

- ACE inhibitors/Angiotensin 2 Receptor Blockers
- NSAIDs
- Diuretics
- Metformin

These can then be restarted when the patient has improved

Adults with advanced heart failure can decompensate rapidly off drugs and will need specialist advice.

High risk drug combinations to avoid

The following are highlighted as being particularly high risk combinations and should be avoided where possible and clearly justified when considered necessary. This list is **NOT** exhaustive, and the safety of other drugs has to be considered depending on individual circumstances.

NSAID

- + ACE Inhibitor or Angiotensin 2 Receptor Blocker + Diuretic ['Triple Whammy' combo]
- + existing renal disease – avoid if possible
- + diagnosis heart failure
- + Warfarin
- + age >75 without PPI

Warfarin

- + another antiplatelet. It is noted that although specific indications for this exist, in a frail group of patients the risk is high and combination should be challenged. (It is important to check who initiated the combination)
- + NSAID
- + Macrolide
- + Quinolone
- + Metronidazole
- + azole antifungal

Heart Failure diagnosis

- + Glitazone
- + NSAID
- + Tricyclic antidepressant

High Risk Medication

Drugs For Which Specialist Advice Is Strongly Advised Before Altering

Include:

- Anticonvulsants for epilepsy.
- Antidepressant, antipsychotic and mood stabilising drugs [e.g. lithium].
- Drugs for the management of Parkinson's Disease.
- Amiodarone.
- Disease modifying anti-rheumatic drugs.

Cardiovascular system in general

- **Anticoagulants** - do patients have an active indication for anticoagulant therapy? Is monitoring robust? Is the INR within the recommended therapeutic range? Are there frequent falls (>1 per week)?
- **Antiplatelets**- does the patient have a history of coronary, cerebral or peripheral symptoms/ events?- If not – consider stopping. Ensure aspirin/clopidogrel combination reviewed as per cardiology advice. Reduce aspirin to evidence-based doses.
- **Statins** – Re-evaluate risk profile for primary/secondary prevention
- **Diuretics** for dependent ankle oedema - consider alternative ways of managing oedema, consider medication causes e.g. CCB
- **Digoxin** in the presence of CKD - consider reducing the dose, or stopping
- **Peripheral vasodilators**- e.g. **Cilostazol, pentoxifylline** , clinical effectiveness not often established
- **Quinine**- Review long-term use-see MHRA advice
- **Anti-anginal medication** - Consider reducing particularly if mobility has decreased with less need for medication

Central nervous system and psychotropic medication

- **Hypnotics and anxiolytics** - discuss reducing long-term therapy with the aim of stopping
- **Antidepressants** - Review combinations e.g. tricyclic antidepressants for analgesia used in combination with other antidepressants for depression
- **SSRIs** are in general better tolerated in people with dementia who also have depression
- **Metoclopramide** - review long-term use
- **Vertigo** - review long-term use of drugs such as **prochlorperazine and cinnarizine**
- Consider cumulative GI effects when co-prescribing **SSRI's+NSAID's/ aspirin**

Endocrine system

- **Metformin** – use with caution in renal impairment due to risk of lactic acidosis
- **Oral corticosteroids** for long term use – maintenance dose should be kept as low as possible with withdrawal considered where feasible. When possible local treatments e.g. inhalations, creams etc should be used in preference
- **Bisphosphonates**-has treatment been taken for > 5 years?

Other Factors To Consider When Conducting A Review

Analgesic medication

- **Strong opioids** - Long term use of for mild-moderate pain – review diagnosis (is pain neuropathic or otherwise not responsive to opiates) and effectiveness - discuss stepping down therapy
- Consider **non-pharmacological treatment** such as gentle exercise, relaxation or TENS
- Check compliance with long-term analgesia
- Check effectiveness- step up or step down analgesia using the WHO analgesic ladder available
- Check safety - reduce use of NSAIDs and opioids and amitriptyline if possible. Prescribe laxatives with opioids.

Gastrointestinal system

- **PPIs and H2 antagonists** - consider reducing the dose or stopping, especially if antibiotics are required (remember increase in risk of *C. difficile*).
- **Laxatives** -reduce overuse if possible. Opioids stopped?

Urogenital system

- **α-blockers / 5α reductase inhibitors** for BPH in men with long term urinary catheters - consider stopping
- **Antimuscarinics**. e.g. **solifenacin**. Is there still a valid indication?

Indications of Shortened Life Expectancy

Triggers which can be used to identify main patients include:

1. Where the answer to the question 'Would you be surprised if this person were to die in the next 6 to 12 months?'
is No.

2. Choice/Need – where a patient with advanced disease is making a choice for comfort care rather than 'curative' treatment.

3. Specific clinical indicators related to certain conditions -often associated in patients requiring help with multiple activities of daily living either at home or in care home due to:
 - Advanced organ failure.
 - Cancer
 - Multiple co-morbidity giving significant impairment in day to day function.
 - Advanced dementia.

Prescribing in palliative care

It is important to consider the risk/benefit of the medication being prescribed particularly with change in prognosis/patient goals with the aim of improving the quality of life.

It is recommended that the guidance contained in the prognostic indicators guidance in the Gold Standards Framework is followed to identify patients nearing the end of life. The full guidance can be accessed at:

<http://www.goldstandardsframework.org.uk>

Frailty

Frailty is defined as a 'reduced ability to withstand illness without loss of function'. Gold standard framework defines this further as:

- Multiple co-morbidities with signs of impairment in day to day functioning.
- Combination of at least 3 of:
 - Weakness
 - Weight loss
 - Slow walking speed
 - Self-reported exhaustion
 - Low physical activity

Drugs That are Tolerated Poorly in Frail Patients

- Digoxin in higher doses 250microgram+
- Antipsychotics (although note caution re rapid symptomatic decline).
- Tricyclic antidepressants
- Benzodiazepines particularly long-term
- Antimuscarinics (e.g solifenacin)
- Phenothiazines (e.g. prochlorperazine)
- Combinations painkillers (e.g. co-codamol v paracetamol).

Drugs associated with falls in the elderly

- Benzodiazepines and other sedatives and hypnotics/ antidepressants/ antipsychotics/ Antihypertensives/ diuretics / sedating antihistamines/ antimuscarinics/ Drugs used to treat nausea and dizziness

Useful links

- <http://www.clingov.eoe.nhs.uk/prescqipp/index.php/samu/finish/26-safe-and-appropriate-medicines-use/159-safe-and-appropriate-medicines-use> - 'PrescQIPP' - **Optimising Safe and Appropriate Medicines Use**
- <http://wales.pallcare.info/> Palliative Care website for Wales. Provides information on:
 - **Advance Care Planning-** follow link **wIPADS** for information about Advance Care Planning (ACP), including identifying appropriate patients for ACP, communication skills, Best interests decisions, Advance Decisions to Refuse Treatment (ADRT) and Guidance about resuscitation decisions. Follow the link 'Anticipatory Prescribing' for information about the Just in Case box and prescribing for Palliative patients.
- <http://book.pallcare.info/> Palliative Care Adult Network Guidance - **Symptom control**
- <http://www.wales.nhs.uk/sites3/page.cfm?orgid=814&pid=49439> **ABHB Palliative Care prescribing guidelines & resources (Follow the link to [Palliative Care Emergency Medicine Packs](#) for specific information about the Just in Case scheme in ABHB)**
- <http://howis.wales.nhs.uk/sitesplus/866/page/48377> **Specialist Palliative Care Service in ABHB** (contains Educational resources and Clinical tools including an opioid calculator):

References:

¹ Quality and Outwork framework 2012 http://www.nhsemployers.org/Aboutus/Publications/Documents/QOF_2012-13.pdf

² Co-morbidity and repeat admission to hospital for adverse drug reactions in older adults: retrospective cohort study M Zhang et al *BMJ* 2009;338:a275

³ Adverse drug reactions as cause of admission to hospital: prospective analysis of 18 820 patients M Pirmohamed et al, *BMJ* 2004;329:15-19

⁴ Using the NO TEARS tool for medication review, T Lewis, *BMJ* 2004;329:434

Status: Issue 1

Approved by: MTC

Owner: Emyr Jones (Emyr.Jones3@wales.nhs.uk)

Issue date: May 2013

Review date: May 2016