

## APPENDIX 1: RESOURCES AND USEFUL INFORMATION TO AID WITH MEDICATION REVIEWS

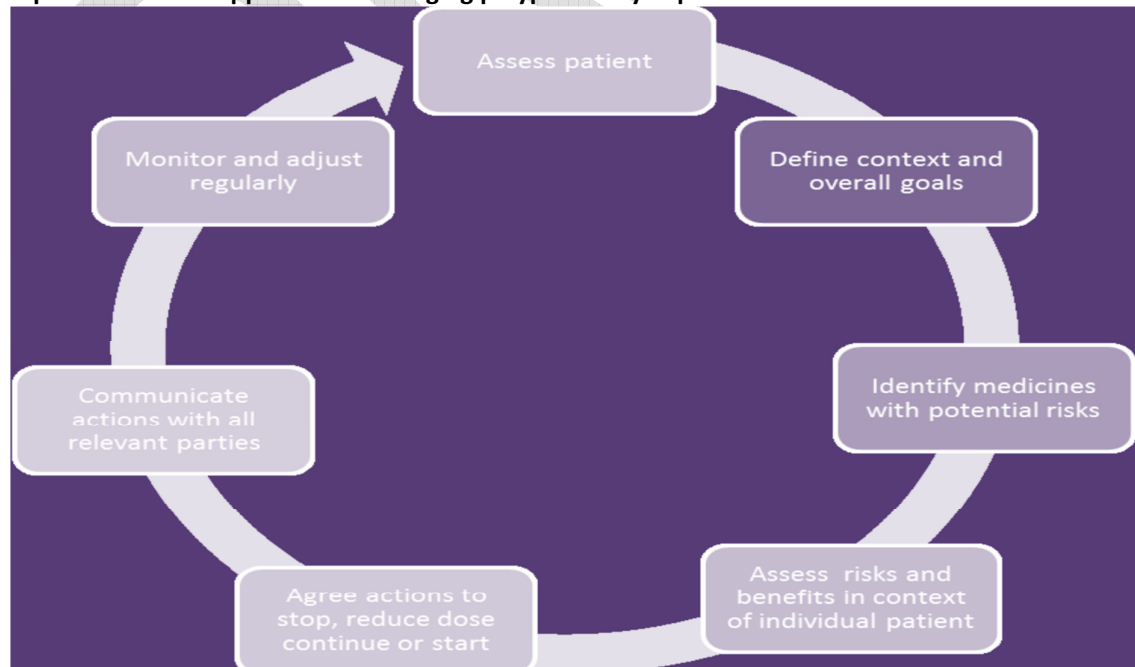
### Terminology

**Polypharmacy** is a term that refers to either the prescribing or taking many medicines. For many years it referred to the prescription or use of more than a certain number of medicines, at least four or five or more medicines per day. More recently it has been used in the context of *prescribing or taking more medicines that are clinically required*, as the number of medicines taken was of limited clinical value in interpreting individual potential problems. The Kings fund divides the definition into “appropriate” and “problematic” polypharmacy which is a helpful distinction in practice. There are number of terms which have come into use over recent years to describe multiple medicines use including and hyperpolypharmacy, see box below.

- **Appropriate polypharmacy** “Prescribing for an individual for complex conditions or for multiple conditions in circumstances where medicines use has been optimised and where the medicines are prescribed according to best evidence.”
- **Problematic polypharmacy** “the prescribing of multiple [medicines] inappropriately, or where the intended benefit of the [medicines are] not realised.”
- **Oligopharmacy** seeks to promote the deliberate avoidance of polypharmacy, which if considered in terms of numbers of medicines, is the prescribing of less than 5 prescription drugs daily.
- **Deprescribing** is the complex process required for the safe and effective cessation (withdrawal) of inappropriate medication, recognising that much of the evidence to support stopping medicines is empirical and based on the patient’s physical functioning, co-morbidities, preferences and lifestyle.
- **Hyperpolypharmacy** is a new term referring to the prescribing of ten or more medicines and the phrase has come into use to distinguish it from polypharmacy, which is increasingly common.

A patient centred approach to polypharmacy. Specialist Pharmacy Service. Medicines Use and Safety. Polypharmacy resource – updated July 2015 V12.

### A patient centred approach to managing polypharmacy in practice



The patient centred approach to managing polypharmacy provides practical support for clinicians in embedding medicines optimisation into everyday practice through **patient centred**, safe, evidence based medication review in the management of polypharmacy

A patient centred approach to polypharmacy. Specialist Pharmacy Service. Medicines Use and Safety. Polypharmacy resource – updated July 2015 V12.

**Factors to consider when doing medication reviews**

Factor	Notes
<b>Mobility</b>	If mobile consider initiating calcium and vitamin D prophylaxis
<b>Continance/Catheters + Anticholinergics</b>	Review need of anticholinergics based on urinary symptoms or if catheter in place.
<b>Pain</b>	Review pain control and tools to measure pain.
<b>Allergies</b>	Ensure documentation
<b>Regular and prn medications</b>	Review regular items that would be expected to be prn e.g. antihistamines, antiemetics
<b>SIP feeds</b>	Review monthly weights and dietary intake.
<b>Observations and monitoring</b>	e.g. weight, BP, BMs
<b>Drug side effects/interactions</b>	Monitor for symptoms of drug side effects/interactions
<b>Creams</b>	Recording not always clear
<b>Dressings, catheters, stoma products, oxygen</b>	Not always recorded on MAR chart

**Conditions identified at putting Care Home residents at increased risk of hospital admissions**

Conditions	
Anaemia – Hb <8g/dL	Falls – ≥2 falls in the last 6 months
Cancer – current diagnosis	Fractures – high risk / Previous low impact fracture
Cellulitis – ≥2 episodes in one year	Hypotension / Postural Hypotension
Chronic respiratory disease -COPD, bronchiectasis, emphysema, asthma	Parkinson's Disease
Congestive heart failure	Pneumonia /Chest Infection – within last 6 months
Dementia – advanced / Recent deterioration in cognitive impairment	Renal Function – acute or chronic deterioration
Diabetes -poorly controlled or with recent infection	Stroke with ongoing disability or recurrent TIA
End of Life	Urinary tract infection – ≥3 episodes in one year / Pyelonephritis
Epilepsy – inadequately controlled	Weight loss - progressive or significant (unintended in last six months) / Malnutrition

Prescribing Review Risk Stratification Tool. London North West Healthcare NHS Trust and Harrow Care Home Support Team. December 2013.

### Inappropriate prescribing associated with medicines

Medicine	Examples of inappropriate prescribing associated with medicine
<b>ACE Inhibitors or ARB</b>	With hypotension, postural hypotension, hyponatraemia, known renal-vascular disease
<b>Amiodarone</b>	Abnormal LFT's, TFT's, hypokalaemia, bradycardia
<b>Anticholinergic drugs</b>	Coexisting dementia (delirium, fall, fracture), with chronic prostatism, with chronic glaucoma (risk of acute exacerbation of glaucoma), with chronic constipation (risk of exacerbation of constipation)
<b>Anticoagulants</b>	With NSAID (GI bleed), with aspirin without gastric protection (GI bleed), with concurrent bleeding disorder, unstable INR, falls, confusion, dizziness
<b>Antidepressants</b>	With long term benzodiazepine (falls), tricyclic's with dementia (delirium, fall, fracture), cardiac conductive abnormalities, constipation (worsening constipation), opiate or calcium channel blocker (risk of severe constipation), prostatism or history of urinary retention
<b>Anti-epileptics</b>	Uncontrolled epilepsy, measured levels out of range, symptoms of toxicity
<b>Antiplatelets</b>	With history of peptic ulcer disease (PUD) without H2 antagonist or PPI, aspirin $\geq$ 150mg/day, with NSAID (bleeding risk), with warfarin (bleeding risk), with SSRI (bleeding risk), with concurrent bleeding disorder.
<b>Antipsychotics</b>	Dementia (risk of mortality and stroke or TIA in the elderly), long term in Parkinsonism (worsening Parkinsonism symptoms)
<b>Beta blockers</b>	Recurrent exacerbation of COPD, frequent hypoglycaemia in diabetes (falls, fractures), in combination with verapamil (risk of heart block)
<b>Digoxin</b>	>125mcgs/day with impaired renal impairment (toxicity)
<b>Diuretics</b>	Abnormal U&E's, with hypotension
<b>DMARDs<sup>1</sup></b>	Abnormal FBC, LFTs and U&E's, symptoms of TB
<b>Insulin</b>	With hypoglycaemia, hyperglycaemia
<b>Lithium</b>	Levels out of range, symptoms of toxicity, hyponatraemia (risk of toxicity)
<b>Non-Steroidal Anti-inflammatory Drugs (NSAID)</b>	History of PUD or GI bleeding with no gastric protection (PUD), moderate to severe hypertension (GI bleed, PUD), heart failure, long term use for mild-moderate OA (PUD), with warfarin (GI bleed), with SSRI (GI bleed), with chronic renal failure (acute renal failure)
<b>Opiates</b>	Long-term in those with recurrent falls (fall, fracture), long term powerful opiates (fall, fracture), regular use for >2 weeks with chronic constipation, long term use in dementia (delirium, fall, fracture), concurrent confusion
<b>Oral Antidiabetic drugs</b>	Glibenclamide or chlorpropamide with type 2 diabetes, with hypoglycaemia, hyperglycaemia
<b>Prednisolone</b>	Long term as monotherapy for rheumatoid arthritis or osteoarthritis (risk of major systemic corticosteroid side effects), history of PUD or GI bleed with no gastric protection
<b>Proton Pump Inhibitors (PPI)</b>	Therapeutic dose for > 8 weeks (risk of fractures), risk of <i>C.difficile</i> .
<b>Sedative drugs</b>	Benzodiazepines and long-term, long-acting benzodiazepines (fall, fracture, benzodiazepine overdose, cognitive decline), risk of confusion, benzodiazepine in COPD, prolonged use of first generation antihistamines (fall, fracture, cognitive decline), $\geq$ 1 sedative drug with falls risk, risk of tolerance, addiction and withdrawal issues

<sup>1</sup>Disease modifying anti rheumatic drugs (DMARDs): Hydroxychloroquine sulphate, Azathioprine, Ciclosporin, Leflunomide, Methotrexate, Entanercept, Infliximab, Sulfasalazine. See BNF section 10.1.3 Prescribing Review Risk Stratification Tool. London North West Healthcare NHS Trust and Harrow Care Home Support Team. December 2013.

### For further reading and references

1. Denis O'mahony, David O'Sullivan, Stephen Byrne, Marie Noelle O'Connor, Cristin Ryan and Paul Gallagher. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. Age and Ageing 2014; 0: 1–6.  
<http://ageing.oxfordjournals.org/content/early/2014/10/16/ageing.afu145.full>
2. Gallagher P, Ryan C, Byrne S, Kennedy J, O'Mahony D. STOPP (Screening Tool of Older Person's Prescriptions) and START (Screening Tool to Alert doctors to Right Treatment). Consensus validation. Int J Clin Pharmacol Ther 2008; 46: 72–83.
3. Paul Gallagher, Denis O'Mahony. STOPP (Screening Tool of Older Persons'potentially inappropriate Prescriptions): application to acutely ill elderly patients and comparison with Beers' criteria. Age and Ageing 2008; 37: 673–679.  
<http://ageing.oxfordjournals.org/content/37/6/673.full.pdf+html>
4. NHS Cumbria. STOPP START Toolkit Supporting Medication Review. February 2013.  
<http://www.cumbria.nhs.uk/ProfessionalZone/MedicinesManagement/Guidelines/StopstartToolkit2011.pdf>
5. South Staffordshire Formulary Working Group (SSFWG). STOPP START Toolkit Supporting Medication Review. August 2014.  
<http://www.southstaffordshirejointformulary.nhs.uk/docs/apg/STOPP%20%20START%20Web%20Version.pdf>
6. Wirral Clinical Commissioning Group. STOPP START Tool to Support Medication Review. March 2015. [http://mm.wirral.nhs.uk/document\\_uploads/other-topics/STOPP\\_START\\_Tool2015.pdf](http://mm.wirral.nhs.uk/document_uploads/other-topics/STOPP_START_Tool2015.pdf)
7. UKMi and PrescQIPP NHS. Optimising Safe and Appropriate Medicines Use. Bulletin 8. June 2013.
8. Prescribing Review Risk Stratification Tool. London North West Healthcare NHS Trust and Harrow Care Home Support Team. December 2013.
9. A patient centred approach to polypharmacy. Specialist Pharmacy Service. Medicines Use and Safety. Polypharmacy resource – updated July 2015 V12.
10. NHS Scotland. Polypharmacy Guidance. March 2015.  
[http://www.sign.ac.uk/pdf/polypharmacy\\_guidance.pdf](http://www.sign.ac.uk/pdf/polypharmacy_guidance.pdf)