Te Awakairangi Health NETWORK

STOPP START Toolkit

Supporting Medication Review in the Older Person

STOPP: Screening Tool of Older People's potentially inappropriate Prescriptions

START: Screening Tool to Alert doctors to Right (appropriate, indicated) Treatments

Contents

Adapted from NHS Cumbria, Clinical Commissioning Group by the TeAHN Clinical Pharmacy Team in March 2014

Introduction

A **medication review** is defined as "a structured, critical examination of a patient's medicines with the objective of reaching an agreement with the patient about treatment, optimising the impact of medicines, minimising the number of medication-related problems and reducing waste."[1]

It is commonly agreed that older people are at greater risk of adverse effects from their medicines due to age related changes and often multiple co-morbidities. These patients are often excluded from drug trials making it difficult for the clinician to weigh up the benefits versus the risks. In addition as patients age they can move from benefitting from a treatment to being at significant risk from it.

In the context of medication review the **STOPP START** tool is designed to identify medication where the risks outweigh the benefits in the elderly and vice versa. These are not absolutes but a means of raising awareness of potentially inappropriate medications. All recommendations from the **STOPP START** tool are included here. The tool was validated in patients 65 and over but there is still a place for clinical judgement in deciding whether a person is "elderly" in terms of the potential effects of medication.

In addition to these lists, consideration should also be given to medications giving daily symptomatic benefit, preventing rapid worsening of symptoms or replacing a hormone vital for normal function, all of which should normally be continued.

General Considerations

General considerations	Condition(s)	Potential risk
Duplication of medicines that are in the same class (eg two opiates, NSAIDs, SSRIs, loop diuretics, ACEI	Multiple conditions	Optimisation of the monotherapy within a single medicines class should be observed before considering a new class of medicines
Benzodiazepines, antipsychotic medicines, first generation antihistamines, vasodilator medicines known to cause hypotension, long term opiates	High risk of falls (>1 fall in past 3 months)	These medicines adversely affect those who are prone to falls

Colour Key

Medication to consider **stopping** in patients ≥ 65 from the STOPP Tool[2]

Medication to consider **starting** in patients ≥ 65 from the START Tool[2], where no contraindications exist

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Gastrointestinal System

Gastrointestinal system	Condition(s)	Potential Risk
STOPP		
Diphenoxylate, loperamide, codeine phosphate	For treatment of diarrhoea with an unknown cause. For treatment of severe infective gastroenteritis	Increased risk of delayed diagnosis and/or exacerbation of some conditions Increased risk of exacerbation or protraction of infection
Prochlorperazine, metoclopramide	With Parkinsonism	Increased risk of exacerbation of Parkinsonism
Proton pump inhibitors for peptic ulcer disease	With full therapeutic dosage taken for >8 weeks	Consideration is needed for earlier discontinuation or dose reduction for some identified conditions
Anticholinergic antispasmodic medicines	With chronic constipation	Increased risk of exacerbation of constipation
START		
Proton pump inhibitor	Severe gastro-oesophageal acid reflux disease or peptic stricture requiring dilatation	
Fibre supplement	Chronic, symptomatic diverticular disease with constipation	

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Cardiovascular System

Cardiovascular system	Condition(s)	Potential Risk
STOPP		
Digoxin >125microgram	With impaired renal function	Increased risk of toxicitiy
Loop diuretic for dependent ankle oedema	No clinical signs of heart failure	Compression therapy may be more appropriate
Loop diuretic	Not appropriate as first-line treatment for hypertension	Safer, more effective alternatives are available
Thiazide diuretic	With history of gout	Could exacerbate gout
Non-cardioselective beta blocker	With COPD	Risk of bronchospasm
Beta blocker	In combination with verapamil	Risk of symptomatic heart block
Diltiazem or verapamil	With NYHA class 3 or 4 heart failure	Worsen heart failure
Calcium channel blockers	With chronic constipation	May worsen constipation
Aspirin and warfarin	Without the use of histamine H2 receptor antagonist or proton pump inhibitor	Creates high risk of bleeding
Dipyridamole as monotherapy	For cardiovascular secondary prevention	There is no evidence of efficacy
Aspirin with history of peptic ulcer disease	Without the use of proton pump inhibitor or histamine H2 receptor antagonist	Increased risk of bleeding
Aspirin dose >150mg/day		Increased risk of bleeding and no evidence of efficacy

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Cardiovascular system	Condition(s)	Potential Risk
Aspirin	With no history of coronary, cerebral or peripheral arterial symptoms or occlusive event	Not indicated
Warfarin	First treatment of uncomplicated DVT duration longer than 6 months or treatment of PE for longer than 12 months	No proven added benefit
Aspirin, warfarin, clopidogrel, dipyridamole	With concurrent bleeding disorder e.g. Von Willebrand's	High risk of bleeding (assess risk/benefit)
START		
Warfarin	For chronic AF	
Aspirin	For chronic AF where warfarin but not aspirin is contra-indicated	
Aspirin	For atherosclerotic coronary disease in patients in sinus rhythm	
Clopidogrel	For history of ischaemic stroke or peripheral vascular disease	
Antihypertensives	SBP consistently >160mmHg	
Statin	For cardiovascular, cerebrovascular or peripheral vascular disease, independent for ADL's and life expectancy >5 years	
ACE Inhibitor or ARB	For chronic heart failure, post MI	
Beta blocker	For chronic stable angina	

Respiratory System

Respiratory system	Condition(s)	Potential risk
STOPP		
Theophylline	As monotherapy for COPD	Safer, more effective alternatives
Systemic corticosteroids	For maintenance therapy in moderate-severe COPD	Long term side effects of systemic steroids
Nebulised ipratropium	With glaucoma	May exacerbate glaucoma
START		
Inhaled anticholinergic	Mild to moderate COPD or asthma	
Inhaled beta-2 agonist	Mild to moderate COPD or asthma	
Inhaled corticosteroid	Moderate to severe COPD or asthma	

Central Nervous System (CNS) and Psychotropic Medicines

CNS and psychotropic medicines	Condition(s)	Potential risk
STOPP		
Tricyclic antidepressants	With dementia	Increased risk of worsening cognitive impairment
	With glaucoma	Exacerbation of glaucoma
	With cardiac conductive abnormalities	Possible pro-arrhythmic effects
	With constipation	Likely to worsen constipation
	With opioids or calcium channel blocker	Increased risk of severe constipation
	With BPH or urinary retention	Increased risk of worsening urinary retention
Benzodiazepines	Long term (> 1 month), long acting benzodiazepines	Increased risk of prolonged sedation, confusion, impaired balance, falls
	High risk of falls (>1 fall in past 3 months)	Increased risk of falls

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CNS and psychotropic medicines	Condition(s)	Potential risk
Antipsychotics Antipsychotics (contd)	As long term (> 1 month) hypnotics For those with Parkinsonism For those with epilepsy High risk of falls (>1 fall in past 3 months)	Increased risk of confusion, hypotension, falls, extrapyramidal side effects Worsen parkinsonism symptoms May lower seizure threshold Increased risk of falls
Phenothiazines	For those with epilepsy	May lower seizure threshold
Anti-cholinergics	To treat extra-pyramidal side effects of antipsychotic medications	Increased risk of anticholinergic activity
Selective serotonin re-uptake inhibitors (SSRIs)	With clinically significant hyponatraemia (<130mmol/l within the previous 2 months)	High risk of hyponatraemia
First generation antihistamines	Longer than 1 week High risk of falls (>1 fall in past 3 months)	Increased risk of sedation and anti-cholinergic side effects Increased risk of falls
Long term strong opiates	First line therapy for mild to moderate pain	Not appropriate as per WHO analgesic ladder for pain control
Regular opiates for more than 2 weeks	With chronic constipation without use of concurrent laxatives	Increased risk of severe constipation

CNS and psychotropic medicines	Condition(s)	Potential risk
Long term opiates	With dementia unless for palliative care or management of chronic pain syndrome	Increased risk of exacerbation of cognitive impairment
Long term opiates (contd)	High risk of falls (>1 fall in past 3 months)	Increased risk of falls
START		
Levodopa	For parkinson's disease with functional impairment and disability	
Antidepressant	For moderate – severe depressive symptoms lasting at least 3 months	

Endocrine System

Endocrine system	Condition(s)	Potential risk
STOPP		
Glibenclamide or chlorpropamide	For type 2 diabetes mellitus	Increased risk of prolonged hypoglycaemia
Beta blockers	With diabetes mellitus and frequent hypoglycaemia (one or more episodes a month)	Risk of masking hypoglycaemic symptoms
Oestrogens	With a history of breast cancer or venous thromboembolism Without progestogen in patients with intact uterus	Increased risk of recurrence Increased risk of endometrial cancer
START		
Metformin	For type 2 diabetes	
Aspirin	Primary prevention in diabetes mellitus with one or more major cardiovascular risk factor present	
ACE Inhibitor or Angiotensin Receptor Blocker (ARB)	In diabetes with nephropathy	
Statin	Primary prevention in diabetes with one major cardiovascular risk factor	

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Urogenital System

Urogenital system	Condition(s)	Potential risk
STOPP		
Bladder anti-muscarinic medicines	With dementia With chronic glaucoma With chronic constipation With chronic prostatism	Risk of increased confusion and agitation Increased risk of acute exacerbation of glaucoma Increased risk of exacerbation of constipation Increased risk of urinary retention
Alpha-blockers	In males with frequent incontinence (one or more episodes per day) With long term in-dwelling catheters (more than 2 months)	Increased risk of increasing urinary frequency and worsening of incontinence Not indicated

Musculoskeletal System

Musculoskeletal system	Condition(s)	Potential risk
STOPP		
Non-steroidal anti-inflammatory drug (NSAID)	With history of peptic ulcer disease unless on proton pump inhibitor	Increased risk of peptic ulcer relapse
	With moderate – severe hypertension	Increased risk of exacerbation of hypertension
	With heart failure	Increased risk of exacerbating heart failure
	With chronic renal failure	Increased risk of deterioration in renal function
Long term use of NSAIDs	For relief from mild joint pain in osteoarthritis >3 months	Simple analgesics preferable and usually as effective
Long term corticosteroid use	As monotherapy for rheumatoid arthritis or osteoarthritis	Risk of major systemic corticosteroid side effects
Warfarin and NSAID prescribed together		Increased risk of GI bleeding
Long term NSAID or colchicine use	For chronic treatment of gout where no contraindication to allopurinol	Allopurinol is the first choice of prophylactic medicine in the treatment of gout

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Musculoskeletal system	Condition(s)	Potential risk
START		
DMARD (Disease-Modifying Anti-Rheumatic Drug)	For active moderate – severe rheumatoid disease lasting >12 weeks	
Bisphosphonates	In patients taking maintenance oral corticosteroid therapy	
Calcium and vitamin D supplement	For known osteoporosis	

References

1. Task Force on Medicines Partnership, Room for Review. A guide to medication review: the agenda for patients, practitioners and managers. Medicines Partnership. London. 2002

2. Gallagher P, Ryan C, Byrne S, Kennedy J, O'Mahony D, STOPP (Screening Tool of Older Persons' Prescriptions) and START (Screening Tool to Alert Doctors to Right Treatment); Consensus Validation. Int J Clin Pharmacol Ther 2008; 46 (2): 72 -83. PMID 18218287

Contact Us

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