PRESCRIBING IN THE ELDERLY WORKSHOP

Alan Davis

Mrs EA 90 yrs old

- Lives alone with a daughter nearby who visits every morning on the way to work. The daughter assists with housework and shopping. Mrs E has been independent with self cares and medication management. She has felt unwell over the last few months and her daughter wonders about her medication. She has had two recent falls but no injuries. She rarely leaves the house now.
- Mrs E's daughter also tells you that she has noticed some slight forgetfulness and wonders if her mother has been missing some medications. She also notes that there has been some urinary incontinence.
- .

Mrs EA

- Mrs E is on treatment for:
  - hypothyroidism,
  - hypertension and
  - degenerative arthritis.
- She was diagnosed as having:
  - TIA 7 years ago and
  - type 2 diabetes 5 years ago
  - There was a painful episode of shingles 2 years ago.

Medications

- Thyroxine 50 microg mane
- Bendrofluazide 2.5 mg mane
- Quinapril 5mg bd
- Aspirin 150mg daily
- Dipyridamole SR 150mg bd
- Amitryptilline 25mg nocte
- Simvastatin 20 mg nocte
- Digoxin 125 microg nocte
- Doxazosin 2mg nocte
- Gliclazide 40 mg bd
- Oxynorm 10mg bd
- Coloxyl and senna 2 mane
- Lactulose 20mls daily prn
- Multivitamins 2 mane
- Zopiclone 7.5 mg nocte prn

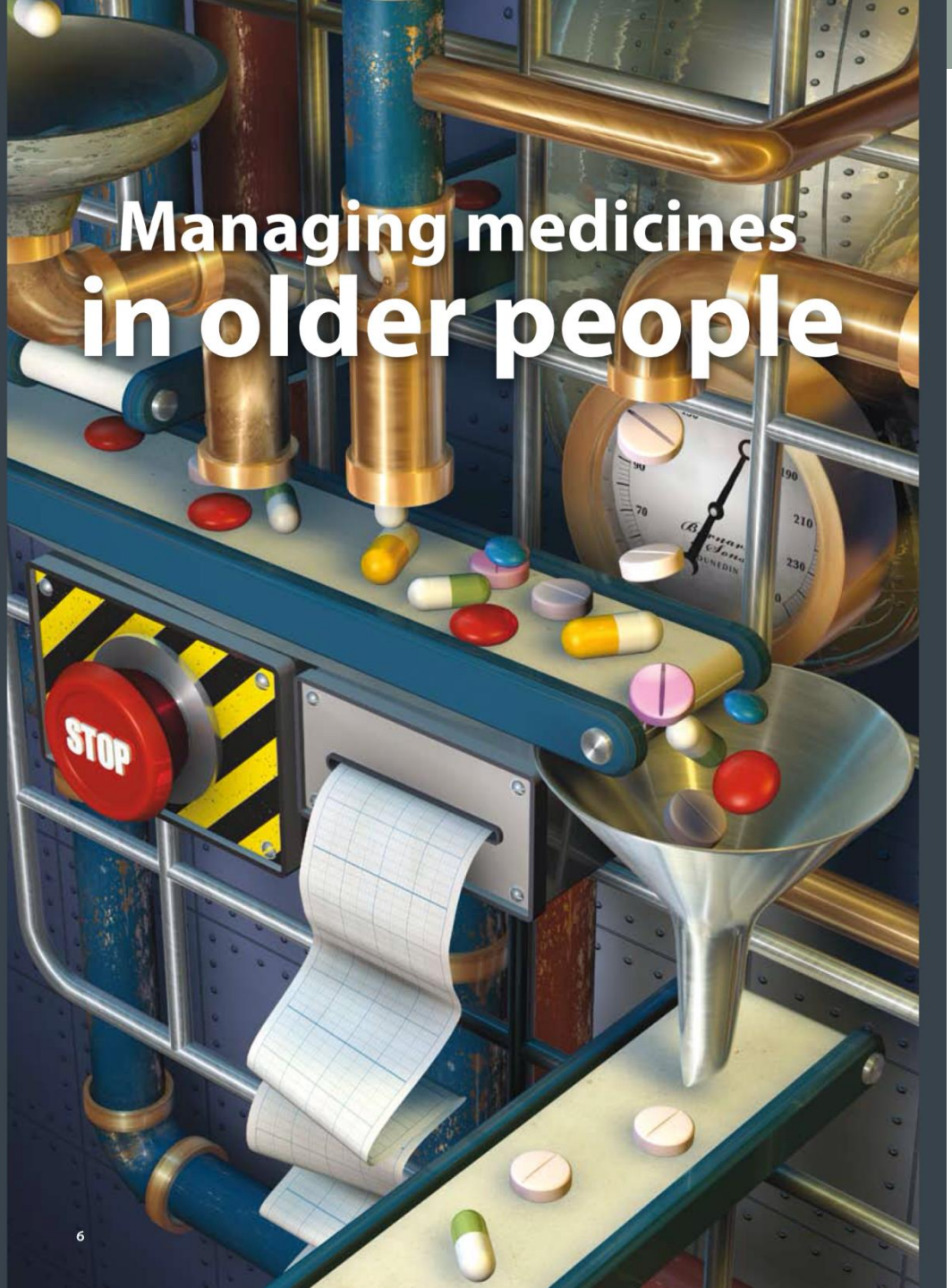
Mrs EA

- What else do you want to know?

- HbA1C = 60 mmol/mol
- TSH = 1.4
- BP = 145/70 sitting 120/60 standing
- MoCA = 20/30

- What steps do we take now?

Managing medicines in older people



Deprescribing framework

1. Accurately ascertain all current drug use

- 'brown paper bag' medication reconciliation

2. Identify patients at risk of, or suffering, ADR

- at risk: ≥8 medications
  advanced age (>75 years)
  high-risk medications
- assess for current, past or highly likely future toxicity

⇢ All three at-risk criteria – aim for ≤ 5 drugs
Discontinue drugs for which there is unequivoval evidence of past, current or future toxicity
(eg triple whammy of NSAID, diuretic, ACE inhibitor)

3. Estimate life expectancy

- clinical prognostication tools or lifespan calculators

4. Define overall care goals

- consider current functional status and quality of life with reference to estimated life expectancy

⇢ If life expectancy less than 2 years, preservation of function and quality of life predominate over prolonging life and avoiding future complications as goals of care

5. Verify current indications for ongoing treatments

- perform diagnosis-medication reconciliation
- confirm diagnostic labels against formal diagnostic criteria
- ascertain, for each confirmed diagnosis, drug appropriateness

⇢ Discontinue drugs for which the diagnosis is wrong or totally unsubstantiated or where, for a confirmed diagnosis, the drug is ineffective

6. Determine need for disease-specific preventive medications

- estimate clinical impact and time to future treatment benefit
- compare this estimate with expected lifespan

⇢ Discontinue preventive drugs whose time until benefit exceeds expected lifespan

7. Determine absolute benefit-harm thresholds of medications

- reconcile estimates of absolute benefit and harm using prediction tools (see http://www.mdcalc.com)

⇢ Discontinue drugs whose absolute level of harm exceeds absolute level of benefit; in 'line-ball' cases elicit patient preferences

8. Review the relative utility of individual drugs

- rank drugs according to the relative utility from high to low based on predicted benefit, harm, administration and monitoring burden

⇢ Discontinue drugs of low utility

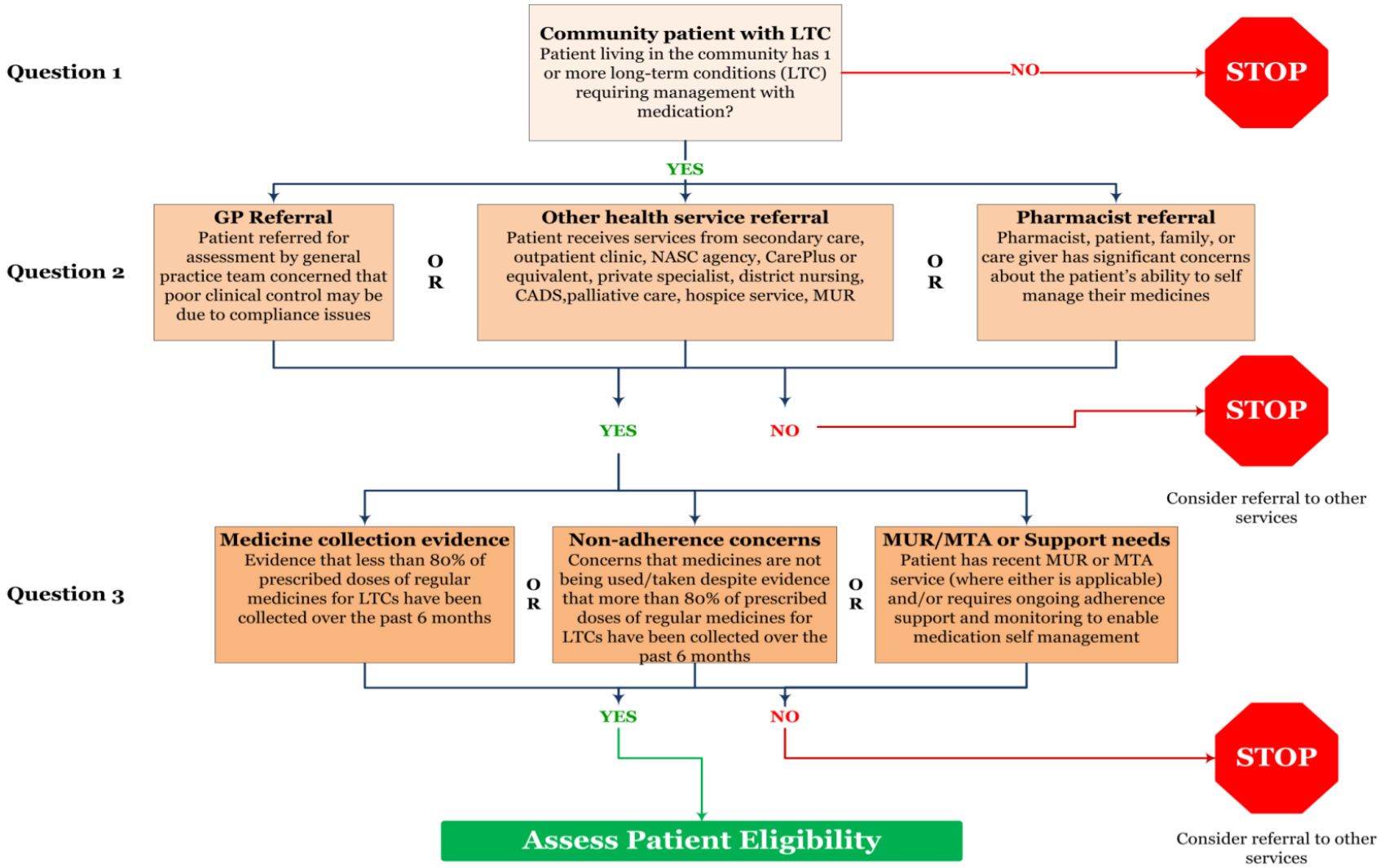
9. Identify drugs to be discontinued and seek patient consent

- reconcile drugs for discontinuation with patient preferences

⇢ Discontinue drugs patients are not in favour of taking

10. Devise and implement drug discontinuation plan with close monitoring

Community pharmacy LTC assessment



Medications

Thyroxine 50 microg mane	**90%**
Bendrofluazide 2.5 mg mane	**90%**
Quinapril 5mg bd	**Not all taken (60%)**
Aspirin 150mg daily	**90%**
Dipyridamole SR 150mg bd	**Not all taken (60%)**
Amitryptilline 25mg nocte	**Most taken (80%)**
Simvastatin 20 mg nocte	**50%**
Digoxin 125 microg nocte	**50%**
Doxazosin 2mg nocte	**50%**
Gliclazide 40 mg bd	**70%**
Oxynorm 10mg bd	**10%**
Coloxyl and senna 2 mane	**40%**
Lactulose 20mls daily prn	**0%**
Multivitamins 2 mane	**90%**
Zopiclone 7.5 mg nocte prn	**70%**

NHS
Cumbria
Clinical Commissioning Group

STOPP START Toolkit Supporting Medication Review

STOPP:

Screening Tool of Older People's potentially inappropriate Prescriptions.

START:

Screening Tool to Alert doctors to Right i.e. appropriate, indicated Treatments.[1]

Medication review tool – the ICARUS grid

Drug and Dose	Indication	Continuing Problem?	Appropriate Dose?	Reduction Possible?	Uncontrolled Symptoms?	See Again?

Medication review tool – the ICARUS grid

Drug and Dose	Indication	Continuing Problem?	Appropriate Dose?	Reduction Possible?	Uncontrolled Symptoms?	See Again?
Lisinopril 10mg daily	Hypertension	Yes	No BP average 100/56	Yes Reduce to 5mg daily		1month Weekly BP till review
Simvastatin 40mg nocte	Secondary prevention cerebrovascular disease	CVA 5years ago	Yes	Evidence base for in 85 year old with advanced dementia lacking		Consider stopping after discussion with staff and family
Amisulpride 50mg bd	Behavioural problems of dementia	No - Staff using behavioural management. No aggressive behaviour for 6mths		Yes Reduce to 50mg daily (with aim to stop altogether if possible)	No	1m with behaviour chart. Sooner sos
Citalopram 10mg daily	Depression	Yes	Consider increase to 20mg daily		High Cornell score Prolonged tears on daily basis. Sad affect	1m
Levothyroxine 100mcg daily	Hypothyroidism	Yes	Needs TSH check-last one 14mths ago			12m if TSH OK
Fortisips tds	MUST tool high malnutrition risk 12m ago	No Has gained weight BMI>20 eating well now fed by staff		Stop		Monitor weight monthly & review 3m

PREVENTION MEDICATIONS

Medication	BENEFIT Prevention of	# of people out of 100 who will have an event prevented	# of people out of 100 who will be harmed
Statins for 5 years	Heart attack/ strokes	1-2 if no Hx of heart disease 5-7 with Hx of heart disease	5-10 - muscle aches 2 - increased liver enzymes 1 in 5-10,000 severe muscle damage
Blood pressure pills (if over 140/90 mmHg) for 5 years		1-2 2-3 if SBP > 160-180 mmHg	10 - low blood pressure/have to stop drug
Metformin for glucose for 5 years		5 1 meta-analysis suggests no benefit	10 - stomach intolerance
Other glucose pills for 2-5 years		0	10 - low blood glucose 10 - weight gain some drugs
Warfarin for atrial fibrillation for 1 year	Strokes	4	2-3 - severe bleed
ACE inhibitors/betablockers for heart failure for 3 years	Heart failure/ death	7	10 - low blood pressure/have to stop drug
Bisphosphonates for low bone density for 2-3 years	Fractures	5 for vertebral 1 for hip	1-2 stomach intolerance 1 in 1-2,000 jaw osteonecrosis

SYMPTOM MEDICATIONS

Medication	BENEFIT	# of people out of 100 who will benefit	# of people out of 100 who will be harmed
Proton pump inhibitors for 8 weeks	Healing/decrease in heartburn symptoms	50	1 in 300-4,000 fractures 1 in 10,000 C difficile infection
SSRI's antidepressants for 4-8 weeks	Not depressed	0 if mild to moderate depression 7 if severe	2-5 stop due to side effects can be difficult to withdraw from increased mortality in the elderly?
Inhaled steroids/ tiotropium for 1 year	COPD exacerbations/ fewer symptoms	10	For steroids 5 - thrush 5 - pneumonia
Cholinesterase inhibitors for 1 year	Alzheimer's - better day to day function	0	10 - intolerance of drug

Life expectancy

- At age 65 – men 21 yrs, women 23 yrs
- At age 80 – men 9 yrs, women 10.6 yrs
- At age 90 – men 4 yrs, women 5 yrs
- Alzheimer's disease (worse with older onset, male, more severe)
  - 82 yr female, mild-mod – 5 yrs
  - 63 yr male, mild, 7 yrs
- CHF new diagnosis – 5-7 yrs
- ARRC - 2 yrs
- Frailty - < 2yrs

Frailty

- **Weight loss** – “What has your appetite been like? → So, have you been eating more or less than usual?” (score 1 for less)
- **Slowing** – “because of your health problems, do you have difficulty walking 100m or climbing one flight of stairs without resting?” (score 1 for yes to either)
- **Reduced strength** – hand grip strength < -2 sd
- **Tiredness/exhaustion** – “in the last month, have you had too little energy to do the things you wanted to do?” (score 1 for yes)
- **Reduced activity** – “How often do you engage in activities such as gardening, cleaning the car, going for a walk?” (score 1 for hardly ever or never)

- 0/5 = robust, 3+/5 = frail

Benefits of prevention medications

MEDICATION	DISEASE	PERIOD	BENEFIT/100 TREATED
Statins	MI/stroke	5 yrs	Primary: 1-2 Secondary: 5-7
Metformin	MI/stroke	5yrs	5
Oral hypoglycaemics	MI/stroke	5 yrs	0
Warfarin in AF	Stroke	1 yr	4
ACE/Beta blocker for CHF	CHF/death	3 yrs	7
Bisphosphonates	Fracture	2-3 yrs	Vertebra: 5 Hip: 1
Antihypertensives (HYVET)	Stroke	2 yrs	1

Medications

Thyroxine 50 microg mane	Continue
Bendrofluazide 2.5 mg mane	Continue
Quinapril 5mg bd	Reduce to once daily
Aspirin 150mg daily	Continue
Dipyridamole SR 150mg bd	Stop
Amitryptilline 25mg nocte	Reduce to 10mg, then stop
Simvastatin 20 mg nocte	Continue
Digoxin 125 microg nocte	Stop
Doxazosin 2mg nocte	Stop
Gliclazide 40 mg bd	Stop
Oxynorm 10mg bd	Stop
Coloxyl and senna 2 mane	Change to diet or bulking agent
Lactulose 20mls daily prn	Stop
Multivitamins 2 mane	Change to monthly Vit D 1.25mg
Zopiclone 7.5mg	Reduce to 3.75mg

HQSC Atlas of Variation – Polypharmacy in older people