Medicine Reconciliation and Polypharmacy

Professional Forum Medicine Management NZNO 2019



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Medicine classification

Medicines Act 1968 and Medicines Regulations 1984

Misuse of Drugs Act and Regulations

- Medicine categories
 - General Sale
 - Pharmacy only
 - Pharmacist only/ Restricted
 - Prescription only
 - Controlled drugs
- Unregistered medicines / Section 29 medicines
- Herbal or 'natural' medicines



Non-prescription medicines

General Sale Medicines

- Available in stores other than pharmacies
 - supermarkets and airports
- Considered to be a low risk of harm

Pharmacy Only Medicines

- Can only be sold in licenced pharmacies
- Larger supplies than general sale products
- Packs have consumer information and must have detailed product labels



Pharmacist Only Medicines

- Also known as 'Restricted' Medicines
- Available without a doctors prescription
 - not available to self-select
 - need a consultation with the pharmacist
- Patient details are recorded and can be audited
 Examples:
 - Chloramphenicol eye drops for conjunctivitis
 - Trimethoprim for uncomplicated UTI
 - Lansoprazole for GORD
 - Levonorgesterel emergency contraception



Prescription Only Medicines

- Are not available for sale
- Doctors, dentists, nurse practitioners, designated nurse prescribers, designated pharmacist prescribers, opticians and vets (but not for human consumption)
- Emergency Supply
 - supply without a Rx in the case of an emergency
 - maximum 72 hours supply
 - onus is on the patient to prove they have been prescribed it in the recent past
 - only by a pharmacist



Classifications can change! New Zealand Doctor



Empire of drinks Food

Confessions of a cough linctus drinke

In Victorian Britain, the opium of the people was not religion, it was simply laudanum

Dextromethorphan

Dextromethorphan has been reclassified from general sale and pharmacy-only medicines to pharmacist-only (restricted). The classification statement now reads:

In practise, this means that all medicines containing dextromethorphan currently available in New Zealand have become restricted (pharmacist-only) medicines. Please follow this link for a list of products affected by the change.

This change will also affect retailers selling the products that were previously classified as general sale and Medsafe is working with these suppliers.

Opium tincture and squill oxymel (Gees Linctus)

Opium tincture and squill oxymel (Gees Linctus) has been reclassified from pharmacy-only medicine to prescription medicine.

In practise, this means that a prescription is now always required for this product.

Modified-release paracetamol

Modified-release paracetamol has been reclassified from pharmacy-only to a pharmacist-only (restricted).

In practise, the two current products affected by this change are Panadol Osteo Modified Release 665mg tablets (GlaxoSmithKline) and AFT Pharmaceuticals Paracetamol Osteo-Tab Modified Release 665mg tablets.

Controlled drugs

Further categorised into class A, B and C

- Class A
 - Methamphetamine, street name 'P'
 - Cocaine
 - Heroin
- Class B
 - Morphine
 - Amphetamine-type substances (Ritalin)
- Class C
 - Codeine
 - Ketamine
 - Benzodiazepines



Controlled drugs

- Medical and Nurse Practitioners
 - 1 month for Class A and B
 - 3 months for Class C (dispensed at 1 monthly intervals)
- Dentists
 - maximum 7 days supply
- Designated Prescriber Pharmacist or Nurse
 - maximum 3 days supply, from list laid out in the Misuse of Drugs Regulations
- CD prescriptions for class A and B must be:
 - prescribed on the triplicate paper prescription form
 - signed by the prescriber



Controlled Drugs

Additional restrictions

- Cannabidiol products
 - require Ministerial approval before they can be prescribed
- Methylphenidate (Ritalin) and Dexamphetamine
 - Medical Practitioners with a vocational scope of Paediatrics or Psychiatry (or on the advice of same)
- Supply of Methadone for the purpose of treating dependence (Section 24 of MOD Act)
 - is a gazetted Practitioner



Unregistered/ Section 29

- Prior to marketing a medicine in New Zealand Ministerial consent is required
 - and submission of substantial paperwork
- Prescribing of unapproved medicines, or, approved medicines for unapproved indications is allowed but
 - only a Medical Practitioner can prescribe an unapproved medicine (not an NP etc.)
- The supplier of an unregistered medicine (a Pharmacist usually) must notify the Director-General of Health
- MANY medical practitioners are not aware of the requirements around unregistered medicines



Unregistered/ Section 29

Feedback | Terms and Conditions, Disclaimer, and User Guide





Unregistered/ Section 29

Feedback | Terms and Conditions, Disclaimer, and User Guide



<u>Home > 4 Central nervous system > 4.8 Antiepileptic drugs > 4.8.1 Control of the epilepsies > Gabapentin</u> and pregabalin

View in the NZF for Children

🗧 gabapentin

Drug action Gabapentin is thought to bind to voltage-gated calcium channels, reducing calcium influx into presynaptic terminals and possibly decreasing the release of excitatory neurotransmitters associated with neuropathic pain and seizure propagation.

Indications treatment of focal seizures with or without secondary generalisation in patients who have not achieved adequate control with standard anti-epileptic drugs; neuropathic pain (section 4.7.3); migraine prophylaxis (section 4.7.4.2) [unapproved]; pruritus associated with end-stage renal disease [unapproved]; intractable hiccup in palliative care [unapproved]



Herbal medicines

- Cannot legally make a therapeutic claim (otherwise it becomes a medicine and must be formally classified with evidence to prove those claims)
- Can and do interact with prescribed medications
 St John's Wort + SSRIs (Fluoxetine)
 - Garlic capsules + Warfarin
- Are unregulated
 - may not contain what they say they contain



Practitioner Supply Order

• PSO

- written order made by a Practitioner and filled at a pharmacy
- supplies of medicines for :
 - emergency use
 - teaching and demonstration purposes
 - certain patient groups where individual prescription is not practicable
- use an individual prescription where possible



Standing Order (SO)

- Written instruction issued by
 - medical practitioner, dentist, reg midwife, NP
- Authorises
 - supply & administer specific medicines
 - without a prescription
- Allows nurses
 - carry out an assessment
 - interpret results
 - decide on appropriate medicine
 - supply according to the SO



Nurse Initiated Medicines

- Non-prescription/OTC medicines
 - administered when needed
 - specified list
 - -developed in consultation with prescriber
 - regularly reviewed
 - Single/one-off use
 - on-going treatment must be prescribed
 - must not be used in presence of a SO
- Health care facility (e.g. aged care)
 - approved by facility/prescriber



Polypharmacy

Medicine reconciliation Deprescribing

Case examples

Video



- 75 year-old man
 - only one regular medicine
 - Metoprolol-CR 47.5mg daily (HTN)
 - smokes 30 cigarettes per day
 - drinks 8-10 standard drinks daily
 - weighs 105 kg
 - recently convinced by family to seek help
 - visited his local GP
 - -diagnosed with depression





• Day 1

- one medicine (Metoprolol)
- started on Paroxetine 20 mg daily (depression)
- 2/52 later presents to his GP:
 - "I'm crook doc...that medicine is no good"
- BP=90/45
- HR=35 bpm
- Metoprolol dose reduced to 23.75mg daily
- Paroxetine stopped, changed to Citalopram 10mg daily



- Day 14 <u>two</u> medicines
 - Metoprolol, Citalopram 个 20 mg daily
- Visits GP on day 30 for routine follow-up
 - reports agitation, insomnia, weight gain
- Day 40 <u>three</u> medicines
 - Metoprolol, Citalopram, Haloperidol (2.5mg bd)
- Body weight now 115 kg



- Day 45 results of investigations
 - fasting BGL =12.5 mmol/L, TC= 6.6 mmol/L
- Day 60 now taking <u>seven</u> regular meds:
 - Metoprolol
 - Citalopram
 - Haloperidol
 - Aspirin-EC 100 mg daily
 - Metformin 500 mg bd
 - Cilazapril 5 mg daily
 - Simvastatin 20 mg daily



- Day 80 –taking <u>seven</u> regular medicines
 - Metoprolol
 - Citalopram
 - Haloperidol
 - Aspirin-EC 100 mg daily
 - Metformin 500 mg bd
 - Cilazapril 5 mg daily
 - Simvastatin 20 mg daily
- Severe back, & knee pain, trial of Tramadol 50 mg tds



- Two days later Jim presents to hospital
 - fever, hypotension
 - Hyper-reflexia
 - myoclonic jerks
- Tramadol stopped on admission
- Psychiatrist review
 - serotonin syndrome??
 - psychotropic medicines changed
- Discharged 3/7 later



- Day 120 Jim taking <u>eleven</u> regular medicines
 - Metoprolol-CR 23.75mg daily
 - Aspirin 100 mg daily
 - Metformin 1000 mg bd
 - Cilazapril 5 mg daily
 - Simvastatin 20 mg daily
 - Venlafaxine-XR 225 mg daily
 - Quetiapine 50 mg bd
 - Zopiclone 7.5 mg at night
 - Thiamine 100 mg daily
 - Transdermal nicotine patches, Paracetamol 2 qid





What has Jim taught us?

- Complex interplay between
 - prescribing medicines, comorbidities and psychosocial factors
 - primary and secondary care
- Considerable potential for harm
- Jim's journey is one taken by thousands every year
- Jim's destination is at least in part determined by us ...



Not a new concept...

"It is an art of no little importance to administer medicines properly: but, it is an art of much greater and more difficult acquisition to know when to suspend or altogether to omit them....."

Philippe Pinel, psychiatrist (1745-1826)



Polypharmacy – too many pills?

- Dorland's Medical Dictionary for Health Consumers. © 2007
 - polypharmacy /poly·phar·ma·cy/ (-fahr´mah-se)
 - administration of many drugs together
 - administration of excessive medication
- Mosby's Medical Dictionary, 8th edition. © 2009
 - polypharmacy



- the use of a number of different drugs, possibly prescribed by different doctors and filled in different pharmacies, by a patient who may have one or several health problems
- Farlex Partner Medical Dictionary © Farlex 2012
 - "shotgun prescription"
 - a prescription containing many ingredients, some of which may be useless, in an attempt to cover all possible types of therapy that may be needed



Polypharmacy – "a growing concern"

- <u>Appropriate</u> polypharmacy
 - potential benefits outweigh potential harms
- <u>Problematic</u> polypharmacy
 - potential harms outweigh potential benefits
- Patients at highest risk
 - elderly
 - multiple comorbid medical conditions
 - often require multiple medications to treat multiple health-related conditions



Polypharmacy in primary care

- Management of long-term prescribing
- ≥ 65 years receiving 10 or more medicines is particularly high
- Most guidelines treat diseases, not patients
 - risky polypharmacy
- Evidence-based interventions
 - has potentially driven growth in prescribing
 - more coherent adherence to evidence-based guidelines
 - much greater use of medicines



Polypharmacy in secondary care

- Prevalence of multiple medicines is also significant
- Initiation and changes of medicines often occur
- Polypharmacy is common
- Impact of hospital stay on the no. of medicines prescribed
- Some studies show
 - consistent ↑ in the no. of meds a patient receives at discharge from hospital compared with admission
 - ADR's from polypharmacy as a major cause of morbidity contributing to hospital admissions



Polypharmacy globally

- Multiple use of medicines is a global phenomenon
- Numerous definitions of polypharmacy
- - polypharmacy is likely to ↑around the world
 - prevalence also \uparrow with socio-economic deprivation
 - people in deprived areas = same prevalence as more affluent patients 10-15 yrs older
 - -some ethnic groups in NZ



Drivers of polypharmacy





Factors contribute to polypharmacy

- No medicine review with patient on a regular basis
- Presume that patient expects their medicines
- Prescribe without sufficiently investigating clinical situation
- Evidence that a particular medicine is the "best" medicine for a problem
- Provide unclear, complex or incomplete instructions about how to take medicines
- No effort to simplify medicine regimen
- Ordering automatic refills



Factors contribute to polypharmacy

- Seeing multiple providers and using multiple pharmacies
- Hoarding meds & insisting on taking meds that no longer maybe appropriate
- Not accurately reporting meds taken or symptoms
 can result in duplicate meds
- Assuming that once medicine started it should be continued
- Changes in activities, smoking, food and fluid intake
 - can affect action of meds



How did we get here?

- Treating symptoms and numbers?
- Treating side effects with an additional medicines?
- Telephone or faxed prescriptions?
- Easier to start or continue a medicine than to stop it?
- AE correlated with stopping a medicine?
- Lack of evidence for "chronic conditions"?
- Discharge from acute care
- Awareness of medicines that are potentially harmful?



Who is responsible?

- Patient related
 - \uparrow co-morbidities with ageing
 - patient/relatives' expectations

 - over the counter medicines
- Clinician related
 - multiple prescribers
 - lack of "formal" medicine reviews
 - cascade prescribing


Paradox of medicines – NOT NEW

 "Medicines are probably the single most important healthcare technology in preventing injury, disability, and death in older adults."

Avorn, J. Medication use and the elderly:current status & opportunities, Health Aff, 1995.

 "Any symptom in an elderly patient should be considered a drug side effect until proved otherwise."

Gurwitz et al. Long-term Care Quality Letter. Brown University. 1995



HQSC Atlas of Healthcare Variation

- Rate of dispensing 5/more medicines ↑ with age (from 1 in 4 people 65 - 74 yrs to over ½ in those aged 85/older)
- Compared the rate of dispensing 5 or more medicines by ethnicity
 - Asian, Pacific, Māori people receive fewer medicines
- No. of medicines taken 个 the likelihood of ADR's and poor adherence
 - in the elderly, led to geriatric syndromes
 - ≥85 yrs receive more medicines than those aged either 65-74 or 75-84 yrs









Key findings

- No. of people receiving 11/more long-term medicines was lower (1 in 20), the rate ↑ sharply with age
- High-rate use of benzodiazepines and antipsychotics
 - use of antipsychotics 个 with age; in some regions up to 1 in 12 people aged 85 and over received an antipsychotic
 - dispensing of benzodiazepines/zopiclone 个 with age (up to 1 in 5 people aged 85 yrs/over)
- Rate of concurrent antiplatelet and anticoagulant use was low



HQSC Atlas of Healthcare Variation





Prompted questions?

- Is it appropriate that people aged 85 and older are more likely to receive 5 or more long term medicines?
- Are the rates of people receiving long term medicines appropriate?
- Should 1 in 4 people aged 65-74 be receiving 5 or more medicines?
- Should over half of those aged over 85 be receiving 5 or more long term medicines?



Domain update 2017

- 22,000 people 65yrs & over received
 - triple whammy in 2016
 - ACE-I/ARB + diuretic + NSAID
 - higher rates in younger Maori & Pacific peoples
 - rates reduced with age
- Results did not include
 - bought OTC NSAID



Reality for older adults?

- Higher levels of medicine use
- Greater vulnerability to medicine effects
- Negative health outcomes
 - increased falls risk, cognitive loss/delirium
 - dehydration, urinary incontinence, constipation
 - depression, anxiety, dementia
- End result can be
 - loss of functional capacity, quality of life
 - often residential care placement as a result





Why are older people more vulnerable?

- Deterioration of physiologic systems with ageing
 - $-\downarrow$ functional reserve makes "tipping over the edge" more likely
 - recovery is slower, less resilience
- Physiologic changes of aging
 - poor judgment, diminished cognitive capacity
 - difficulty describing symptoms or adverse effects
 - fat to muscle ratio, \downarrow body water
 - reduction in serum albumin



Pharmacokinetic features

- Absorption
 - → gastric acid alters absorption of some medicines (iron, Ca)
- Drug distribution
 - free drug concentrations (Warfarin, Phenytoin)
- Metabolism
 - \downarrow first pass metabolism \uparrow bioavailability (opiates)
- Elimination
 - $-\downarrow$ clearance of renally excreted drugs (Digoxin)



Evidence in older adults?

- Under-represented in clinical drug trials
 - few studies enrol older adults
 - fewer enrol frail older adults/multiple co-morbidities
- Few guidelines to cover management of co-morbid conditions
- Clinical practice tends to extrapolate



Medicines of concern in older adults

- Significant anticholinergic effects
 - antipsychotics, antidepressants, antispasmodics
- Falls
 - antipsychotics, antidepressants (tricyclics), hypnotics, antihypertensives, antiparkinson meds
- Bleeding
 - warfarin, antiplatelets
- Indications not or no longer present
 - statins, PPIs, osteoporosis meds, antipsychotics



Drug reactions mimic ageing

- Unsteadiness
- Dizziness
- Confusion
- Fatigue
- Insomnia
- Drowsiness
- Falls
- Depression
- Incontinence



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ADE's in older adults





Other patients

- Cumulative medicines risk in other patients
 - Chronic disease
 - Complex medicine regimes (>6 meds/day)
- Medicines risks
 - Medication adherence
 - Patient's understanding of treatment
 - High risk drugs (warfarin, insulin)
 - High risk life-style factors (smoking, ETOH, falls)
 - Drug/drug/disease interactions
 - ADR/allergies



Prescribing cascade?

- Side effects caused by one medicine
 - leads to another being added
 - statins commonly induce muscular aches and pains
 - -then treated with NSAID
 - » raises BP
 - » warranting treatment with anti-hypertensive
 - » and so on.....
- Cumulative consequences beyond the side effects of individual medicines



Examples of Prescribing Cascades

- *Ibuprofen \rightarrow hypertension \rightarrow antihypertensive
- Metoclopramide \rightarrow parkinsonism \rightarrow Levodopa
- Risperidone \rightarrow parkinsonism \rightarrow Levodopa
- *Amlodipine \rightarrow oedema \rightarrow Furosemide
- Donepezil \rightarrow urinary incontinence \rightarrow Oxybutynin
- *Furosemide \rightarrow hypokalaemia \rightarrow potassium supplement
- *Omeprazole \rightarrow low B12 \rightarrow B12 supplement
- Beta-blocker \rightarrow depression \rightarrow antidepressant
- *NSAID \rightarrow heartburn \rightarrow H2-antagonist/PPI



Long term conditions?

- Associated with adverse drug reactions
 - CKD
 - Diabetes
 - Malignancy
 - Congestive heart failure
 - Peripheral vascular disease
- Identify patients
 - at risk of serious ADE
 - recommendations to reduce the risk



Can we do better?

Medicine reconciliation

• Medicine review



Medicine reconciliation

- Carried out
 - prescribing, dispensing, administering medicines
 - includes nurses
- Obtaining an up-to-date and accurate medicine list
 - use at least 2 sources
 - talk to patients/family/caregivers
 - obtain the most accurate list possible
 - clarify allergy status
- Vital aspect of patient safety
- Key feature in transition of care



Medicine reconciliation

- Ensure patients have cognition and capacity
- Ask about
 - recently stopped/started medicines/changes in doses
 - OTCs/herbals/"recreational drugs"
 - how medicines are managed (aids used?)
 - hand-held documents
 - warfarin books, insulin cards
- Check when prescriptions were last issued/collected
 dates of issue & quantities of medicines issued
- Check for hospital/clinic letters
- Always document !!!



Medicine review

- Is the medicine still needed?
- Has the condition changed?
- Can the patient continue to benefit?
- Has the evidence changed?
- Have the guidelines changed?
- Is the medicine being used to treat an iatrogenic problem?
- What are the ethical issues about withholding care?
- Would discontinuation cause problems?
- Have the courage to review specialist recommendations





Medicine review

- Avoid increasing a dose until fully verifying compliance with currently prescribed dose
- Accurately record medicines & their dosing schedule at each visit
 - includes all prescribed, OTC, herbals and supplements
- Review adverse effects of prescribed medicines
 - decrease, switch or stop antihypertensive agents for *dizziness, hypotension, bradycardia*
 - relax management goals (e.g. HbA1c) in the elderly, especially if *hypoglycaemia* occurs



Medicine review

- Re-evaluate medicines started at a younger age
 - Adjust for \downarrow renal & hepatic function
 - Metformin may require discontinuation
 - Agents started may be contraindicated in older patients
 - anticholinergic medicines
 - Agents may have failed to improve quality of life or functional status
 - dementia medications (e.g. Donepezil)



Recognising other factors

- Consider medicines with acute confusion
 - narcotics, antidepressants, antihistamines, etc.
 - particularly vulnerable population dementia
- Don't forget alcohol
 - interacts negatively with almost everything
 - an independent risk factors for delirium & falls
 - not uncommon for elderly to drink
 - reduced tolerance to even small amounts



When starting medicines

- Start low and go slow
- Least toxic medicines = widest therapeutic window
- Avoid treating iatrogenic side effects with another medicine
- Avoid treating every symptom
- Avoid duplicate drugs from the same medicine class
- Re-evaluate 2-4 weeks after starting a medicine
- Avoid starting more than one new medicine at a time



Every visit = opportunity to STOP a medicine

- Trial off one medicine at a time
- Re-evaluate weeks after stopping a medicine
 - what symptoms were improved, unchanged, worsened?
 - what clinical markers changed (e.g. BP)?
 - is there a reason to restart or replace this medicine?

"Its easier to start than to stop"



De-prescribing?

- "Trial of multiple medicines discontinuation"
- Process
 - better off on less medicines?
 - lower doses of some medicines?
- Talking to patient
 - "what matters most"
- Controlled "pause" some of medicines, monitoring what happens
 - "less is more", "drug holiday"





Guiding principles

- Annual structured medicine review
- Shared decision making if appropriate
- Advance care planning/advanced directives
 - discuss annually
- Patient's permission to stop/opt out of medicines
- Assure patients that medicines can be re-started if necessary
 - discontinuation may be a trial
- Consider when geriatric care becomes palliative care



Tools for reducing polypharmacy

- Prescribing indicators used to identify problematic or inappropriate polypharmacy
 - AGS Beers Criteria for Potentially Inappropriate Medication (PIMs) Use in Older Adults
 - STOPP/START Criteria



2019 AGS Beers Criteria

- Originally developed in 1991 by Mark Beers (geriatrician)
- $1991 \rightarrow 1997 \rightarrow 2003 \rightarrow 2012 \rightarrow 2015 \rightarrow 2019$
- Identifies medicines that pose potential risks outweighing potential benefits for people ≥65 years
- Guide
 - not meant to be punitive
 - not meant to supersede clinical judgment or an individual patient's values & needs



2019 AGS Beers Criteria - Categories

1 st Category	2 nd Category	NEW 3rd Category NEW
PIMs for older people:	PIMs for older people:	Use with caution in older adults
 Pose high risks of adverse effects <u>OR</u> Appear to have limited effectiveness in older pts <u>AND</u> There are alternatives to these medications 	 Who have certain diseases/disorders b/c these drugs may exacerbate the specified health problems 	 May be associated with more risks than benefits in general However, may be the best choice for a particular individual if administered with caution
 53 medications or medication classes that should be avoided in older adults 		 14 that should be used with caution



"Medicines optimisation"

- Improving medicines use
- Way medicines are selected, prescribed, administered and reviewed to optimise the contribution that medicines make
- Requires evidence-informed decision-making about medicines
 - involving effective patient engagement
 - professional collaboration
 - provide an individualised, person-centred approach to medicines use



Summary

- Inappropriate polypharmacy
 - imposes significant problems
- # of prescribed medicines is single greatest risk
- Structured medicine review & reconciliation
- Deprescribing
 - minimising polypharmacy and improve outcomes
 - are barriers!! are solutions!!
- Give the patient/family the informed choice
- Need for better engagement with more vulnerable population groups



Case vignette

- Mrs May, 92-year-old woman
 - your patient for many years, visits with her son, Ken
 - explain that she's been started on another medication
 - she now needs to use 2 blister packs daily to hold all of her 17 medications
 - Ken sighs heavily and says it's hard to get her to take the medications she already has
 - she's getting dizzy and confused, her nausea is worse and she hardly eats
 - had several falls recently and is now afraid to go out



Issues

- Ken is clearly worried about his mom
- You now wonder whether her recent symptoms could be drug induced
 - you offer to take a closer look with the GP
 - see if any medications might be causing problems
 - whether her medication regimen can be simplified
- Ken says reviewing all of her medications would be a great help


Issues

- A quick check
 - Mrs May is taking 3 medications that appear on both the Beers and STOPP lists (older adults)
 - Lorazepam, Metoclopramide, and Glibenclamide
 - taking a number of anti-hypertensives (4)
 - taking Metformin for diabetes
 - a number of additional medicines
 - 17 in total
 - pill burden of 36 tablets/capsules daily



Issues

- Think about Mrs May's recent symptoms
 - dizziness, falls, confusion, and nausea
 - believe they might be related to her medications
 - Lorazepam = dizziness, confusion, and falls
 - antihypertensive medications = all reduce BP
 - may result in dizziness, and hence falls
 - Few questions
 - ullet nausea started soon after Metformin dose was \uparrow
 - also when the Metoclopramide was started
 - is this a prescribing cascade?



Discussion with Mrs May

- Metoclopramide has not helped her nausea
- Started taking Glibenclamide regularly again at the same time as her Metformin dose was increased
- Had been previously taking Glibenclamide sporadically
- When previously told that her diabetes was out of control & the pharmacist started making blister packs for her, she decided to start taking everything again
- BSL log shows several recent readings between 3 and 4 when she gets up in the morning
- Check her BP = 105/60 = 4 antihypertensives



Discussion with Mrs May

- Repeats
 - Metoclopramide does not help her nausea
 - her appetite is terrible
 - she does not want to go out with friends
- She wants to keep taking Paracetamol
 - it effectively treats her knee pain
 - and helps her get around the house
- Her diabetes (dx 3 yrs ago) is not a big bother
 - she doesn't think she needs all that medication



Suggestions to Mrs May

- Lowering the Metoclopramide dose gradually and stopping over the next couple of weeks
- Note her recent low BSL's, nausea started soon after the Metformin dose $\boldsymbol{\uparrow}$
 - suggest \downarrow Metformin back to the previous dose
 - switching Glibenclamide to an equivalent dose of Gliclazide to reduce the risk of hypoglycemia
 - ask Mrs May to continue to monitor her nausea and BSL's



A few weeks later....

- She is still dizzy, tired, and confused during the day
 - wonders if her medications might be the cause
 - low BP, as well as Lorazepam, may be contributing?
- When you mention the Lorazepam?
 - she's willing to try again and agrees to taper the dose of the Lorazepam
- GP begins tapering doses of her antihypertensives
- With the agreement of the patient, you email the information to her son



And later....

- After checking with Mrs May every couple of weeks and
 - able to stop Lorazepam
 - significantly reduce her antihypertensives
- By combining several medications
 - reduced her no. of meds to 9 & her pill burden to 16
 - now taken meds twice daily instead of four times daily - with only one blister pack!
 - she is feeling much better, eating normally
 - started going out again to her various activities



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QUESTIONS?



