medicines reconciliation and polypharmacy

NZ Nurses Organisation
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clinical advisory and prescribing pharmacist
the next 85 minutes ….

- different pharmacists roles
- medicines reconciliation
  - what it is
  - pitfalls
  - examples
- “polypharmacy”
  - is it all as bad as we hear
  - approaches to polypharmacy
- questions
pharmacists?

- community pharmacists
- hospital pharmacists
- primary care / general practice pharmacists
  - clinical medication reviews
    - complex patients
    - long term conditions (multiple comorbidities)
  - medicines reconciliation and follow up
  - medicines information – all staff
  - clinical audits – individualised
  - patient groups (self-management)

Clinical advisory pharmacists are responsible and accountable for:
reducing drug related morbidity and mortality through the identification and resolution of drug therapy problems by optimising medicines therapy for individuals.
medicines reconciliation

- collect
- compare
- communicate
- ..... ?medication history taking++

Medicines reconciliation is the **process** to **collect, compare and communicate** the ‘**most accurate**’ list of medicines that a patient is taking, together with details of any allergies and/or adverse drug reactions (ADRs) and non-prescribed, Rongoa, complementary or OTC medicines with the outcome of providing correct medicines for a given time period.
why?

- more than 50% of medication errors occur at transition of care
- up to 95% of medication histories in primary care are reported to contain at least 1 error
- up to 33% of errors have the potential to cause harm
- patients with one or more medicines missed off after discharge from hospital are 2 to 3 times more likely to be readmitted
41% of discharge summaries had a medicine error or errors

- 20% had an incorrect medicine list in the PMS pre-admission
- 14% had medicines that were listed on the PMS medicine list prior to admission but missed off at admission to hospital, for the duration of their stay and at discharge
- 13% of discharge summaries contained an incorrect medicine dose at discharge
- 5% had a significant drug interaction or contraindication
- 10% required contact with the hospital to clarify missing information e.g. clarify intentions/doses, missing information

Over a 2 week period in 2012, 30% of discharge interventions were classified as very significant or significant and had potential to avert ED presentation or admission
collect - sources

- **primary source** - the person / carer
  - preferably from the containers plus person
    - check dispensing date
  - ask the person how they take the medicine
    - how many tablets, how often, when, last taken … especially prn
    - …. and what do they think it is for
    - recently started medicines
    - recently discontinued medicines
    - allergies or unwanted effects
  - remember – inhalers, eye drops, nasal sprays, OTC, health supplements … and medicines from friends / family
collect - sources

- **secondary** sources
  - electronic health record
  - community pharmacy
  - general practice
  - residential care
  - .... private specialists, lead maternity carer, family

- **tertiary** sources
  - clinic notes
  - discharge summaries
  - transfer letters
  - yellow card
compare  (and explore)

- at least two sources
  - verbal vs labels
  - clinic letters vs general practice list
- any explanation? The drug detective
communicate

- the hand over - how
- document
  - date, sources
  - discrepancies [label says but only takes …; X says Y stopped this]
    - omissions / additions
    - dose discrepancies
  - decisions - clear
- referral to ....
- and who will keep the patient informed
what do you see?

- OD vs BD
- prn medicines …. which, when, for what
- ADRs – as opposed to allergies
- old lists from clinic, tapering dose
- ‘dropped’ medicines … X said to do, but I do
- adherence is erratic – depends on the day – and when asked
- different perceptions … X told me; I have an allergy …
we are drowning in information
- but starving of wisdom

E.O Wilson

polypharmacy
vs
optimisation
not just about ‘aged’ people …

- multiple co-morbidities
  - guidelines
- prescribing cascade due to ADRs
- symptoms - escalating
  - pain
  - sleep

*the majority of medicines are of no benefit to the majority of patients*
drug related morbidity and mortality
  - 5 – 15% hospital admissions (up to 30%)
  - ADRs: 7 x more common in 70 – 79 yo than 20 – 29 yo
  - ADRs: subtle and more likely to go unrecognised

people are heterogeneous
  - chronological versus physical versus mental age
  - co-morbidities (versus genetics), life expectancy

minimal studies in the very aged (> 80 years)
messages - conflict?

- must follow guidelines
- must achieve clinical indicators
- under-treatment is ageism – look at the studies!!
- pressure – drug company (DTCA), patient / family / H & D
- poly-pharmacy is bad, bad
- decrease drugs in the elderly
- inappropriate medicines in the elderly – poor performance indicators
- individualise therapy / QoL
- ? patient / family
- ‘internal unease’

*damned if you do and damned if you don’t*
messages - guidelines – useful but ….

- population based – evidence in ‘normal’ populations
- generalised, at times vague
- single disease …. but multiple conditions
- vulnerable to changes in evidence [HTN]
- less specific in
  - multiple co-morbidities / medicines
  - extremes of age, weight
  - organ impairment – renal, hepatic
  - ethnicities
  - phenotypes
pragmatic … balancing

- not necessarily ideal (guidelines), but aiming for optimal (individualised)

- benefits vs harms
  - HbA1c
  - pain
  - older people
glycaemic control

- intense glycaemic control
  - nephropathy, retinopathy, neuropathy
  - long term
- benefits – limited long term
- harms – hypoglycaemia, pill burden
- jane has an HbA1c of 56 mmol/mol and is on metformin 500 mg twice daily … what now?
  - ‘older’ people …. 55 to 64 mmol/mol

ease off the antihyperglycaemics …. taper gliclazide
pain – and other prn medicines

- tramadol 50 mg 1 – 2 tds prn
- paracetamol 2 q4h prn, max 8 tablets a day
- ibuprofen 200 mg 2 tds prn
- ondaneprone 4 mg tds prn

Ask the next 10 patients you see 😊
pain – escalation and de-escalation

- **acute** vs **chronic pain**

- **de-escalation**
  - opiates – tramadol
  - gabapentinoids – gabapentin, pregabalin
expectations

- most earlier analgesic studies are post-operative / dental
- pain changes overtime – real but some rewiring
- a ‘good’ response is a 50% reduction in pain
- rct’s provide averages
- explanation, assurance and managing expectations crucial
- optimisation, not maximization / minimisation
new medicines effectiveness?

- **number needed to treat (nnt)** [> 50% reduction in pain]
  - tramadol 4 – 5
  - pregabalin 4 – 5
  - gabapentin 5 – 8

- **number needed to harm** (gabapentin, pregabalin)
  - dizziness 19%
  - somnolence 14%
  - peripheral oedema 7%
  - gait disturbance / ataxia 9%
  - memory ~1%
  - dependence / misuse
  - mood (anti-epileptic)
  - respiratory depression esp. with opiates, BDZ
  - Weight gain
  - **Caution with driving**
de-prescribing / de-escalation

- **very** slow … months
- **and** extensive commitment

- preferable to identify those with chronic pain and refer early
older people – guideline driven

- mrs FE is 86 years old with dementia [MOCA 19 / 30]
- medical conditions
  - diabetes, IHD, HF, osteoarthritis, frailty

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discontinuing medicines in the elderly

- does not worsen outcomes; reduces adverse drug events.
  Bain K et al. JAGS. 2008; 56: 1946-52
- 238 medicines stopped in 124 patients
  - no clinical consequences in ~ 75%
- bp lowering: 35 - 40% remained normotensive
- antipsychotic: reduced risk of falls
discontinuation of medicines

- 199 ‘disabled’ patients in residential care
- stopped 332 medicines (mean 2.8 / patient)
- success in 88% of patients with 90% of medicines
  - nitrates (100%)
  - h$_2$ antagonist (94%)
  - bp lowering (82%)
  - frusemide (85%)
  - potassium (100%)
  - iron (95%)
  - sedatives / tranquillisers (88%)
  - antipsychotic (69%)

- mortality 45% (control) versus 21% (discontinued)
- acute care referral 30% (control) versus 12% (discontinued)

Garfinkel D et al. IMAJ. 2007; 9: 430-34
so should we de-prescribe? – and not follow the guidelines?

the application of guidelines for specific chronic disorders is not always suited to an older person with co-morbidities, frailty

- **beneficence** [benefits]
  - evidence for likely benefit in this particular person? (NNT)

- **non-maleficence** [harms]
  - adverse effects likely for this particular person, given their age, co-morbidities and other medicines? (NNH) .... *We expect death, we used the medicines to reduce death .... But do we know if they, or the targets, are increasing mortality? ... BP, BG*

- **autonomy**
  - what does this person want?

*people may have a life expectancy that is shorter than the time needed to benefit from the drug ... or the potential life extension may be very short*

*QoL – the balance shifts*
if we treat – what’s ‘appropriate’?

- e.g. beers, medication appropriateness index, stop/start
  - what are the patient’s / family’s views?
  - is there still an indication (symptoms)?
  - what are the potential adverse effects?
  - what are the long-term benefits?
  - is a trial discontinuation / dose reduction feasible - how?
  - document, plan, share. monitor

- but what about “us”
  - as big a step as starting an medicine – possibly bigger as it we are no longer ‘preventing’ research-based morbidity and mortality
  - medicines often started in response to an event (hospital), and may still be ‘seeing’ a specialist
  - conscious effort to transfer to palliative care
  - just leave well alone
discontinuation / dose reduction
... or do not start

- primary / secondary prevention … **NNT**
  - antithrombotics – aspirin, anticoagulants
  - blood pressure lowering (target)
  - statins (? discontinue > 85 years)
  - frusemide (if not for heart failure)
- hypoglycaemic medicines
- omeprazole
- nsaid
- bisphosphonate / alendronate
- antipsychotics
- iron
- potassium
- benzodiazepines
Discontinuation and tapering

- start low, go slow ..... and reverse slowly (months)
  - depends on duration of use
    - \( \beta \)-blockers ... halve dose every month
    - PPI’s ... halve dose every month [patient control]
    - gabapentin / pregabalin / opiates
    - benzodiazepines
    - antidepressants – SSRIs and TCAs
    - antiepileptic medicines
    - anticholinergic medicines
    - antihyperglycaemics
    - blood pressure lowering
- no need to taper – alendronate, iron, potassium, warfarin
older people — remember mrs FE

- mrs FE is 86 years old with dementia [MOCA 19 / 30]
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**step 1 – taper, and keep tapering**

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*italics – further clinical information required; depends on effect of initial step*
discontinuation?

- 84 year old frail woman fractured her neck of femur. Discharged to a resthome on:
  - metoprolol 95 mg daily
  - candesartan 32 mg daily
  - amlodipine 5 mg daily
  - simvastatin 40 mg nocte
  - aspirin 100 mg daily
  - omeprazole 20 mg bd (new)
  - alendronate 70 mg weekly (new)
  - cholecalciferol 1.25 mg monthly (new)
  - zopiclone 7.5 mg nocte prn (new)
  - laxsol 2 nocte prn (new)

- No history of cardiac event (‘hypertension’ since 1996)
- BP after two weeks at resthome ~ 136 - 142 / 60 – 64 mmHg
a frail 89 year old woman in a retirement village apartment, with AF

preadmission: diltiazem 180 mg daily, aspirin 100 mg daily.
(\text{LDL} = 1.4 \text{ mmol/L})

potential TIA late one evening. returned late next afternoon on

- warfarin mdu
- diltiazem 180 mg daily
- atorvastatin 40 mg daily
- cilazapril 2.5 mg daily
- bendrofluazide 2.5 mg daily
- omeprazole 20 mg daily
summary – reducing medicines

- shared decision making
- advanced treatment directives / advance care plan - discussed annually (enduring power of attorney)
- document decisions / discussions and share with secondary / primary care when feasible
- annual structured, systematic medication review. Give patients permission to stop medicines / opt out
- consider when geriatric care becomes palliative care
- next time there is a ‘mystery’ or falls, weight loss / nausea, incontinence, cognitive impairment … consider stopping medicines, not starting
- discontinuation ~ 75% successful - monitor
Nga mihi nui