Polypharmacy: reducing unnecessary and dangerous drugs

Family Council

El Reposo Nursing Facility

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Why are we here? To learn from the mistakes of others

- Will Rogers said…
  - There are 3 kinds of men. The ones who learn by reading. The few who learn by observation. The rest of them have to pee on the electric fence for themselves.
- **General Goal:** to understand why "less is more" – information so you understand why we constantly reduce drugs!

Outline

1. General Guidelines for Drug Therapy in Srs
2. High Risk (unsafe) Drugs for Seniors
   - **Beers list** and others
   - *Choosing Wisely 2014 campaign*
3. Polypharmacy & six steps to reduce it
   - State regulations we must follow
4. Pearls & Points to Ponder
5. Questions ?

1. Guidelines for Safe Drug Therapy

Decision-Making Principles & Foundations

1) First, do no harm – *Primum non nocere*
2) Start low, go slow
3) Relieve suffering - the goal of Medicine
4) Avoid the "pill for every ill" thinking
5) Remember the placebo effect

Foundation 1: First, do no Harm !

- Evidence why should we be concerned
  - Srs = 13% population; take 30% Rx *[Williams,2002]*
  - Suffer from 'Geriatric Syndromes' - constellations of symptoms – not 'diseases'
    - Falling; delirium; syncope; wt.loss; dizziness; urinary incontinence
  - 14-52% srs take at least 1 inappropriate med *[McLeod]*
  - 27% Srs. on 5+ meds w/ 12% S/E requiring Rx [*Reason. FP 2012*]
  - Same problem: Europe, US, Canada, Australia
- **Srs are physiologically different !!**

Why are drugs a Problem for Srs?

Cochrane 2012: polypharmacy causes 10% admissions

- Medical mgmt is most effective strategy to improve health outcomes in multiple chronic conditions [e.g. c/t case mgmt]

Physiologically, elders not "just older adults":

- Impaired/slower drug metabolism in liver
- Decreased renal function = poor drug clearance
- Changes in fat and blood distribution
- Increased brain sensitivity

Challenges in Treating Multiple Chronic Conditions [Geriatric Syndromes]:

High prevalence [very common problem!]

Increasing use of meds [more prescriptions!]

More drugs have more side-effects:

- More falls and fractures
- More confusion/delirium
- More nausea, constipation or diarrhea
- Symptoms of ADE's often misdiagnosed

- Stubborn/feisty seniors on few meds do seem to live longer!

Why Polypharmacy is Harmful !

- POLYPHARMACY: the use of multiple medications and/or the administration of more medications than are clinically indicated. ***[Am J Geriatr Pharmacother. 2007]***
- More than five (5) Rx = reduced QOL *[Morley]*
- **Polypharmacy: >5 Rx per *Stat Can***
- 25% of ADE in >80yr need admission *[Williams]*
- Increasing published evidence supports fewer drugs…

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…"Foundations 2,3,4,5"…

2: Start low, go slow !

3: The goal of medicine is to prevent & relieve suffering *[Cassel, 2004]*

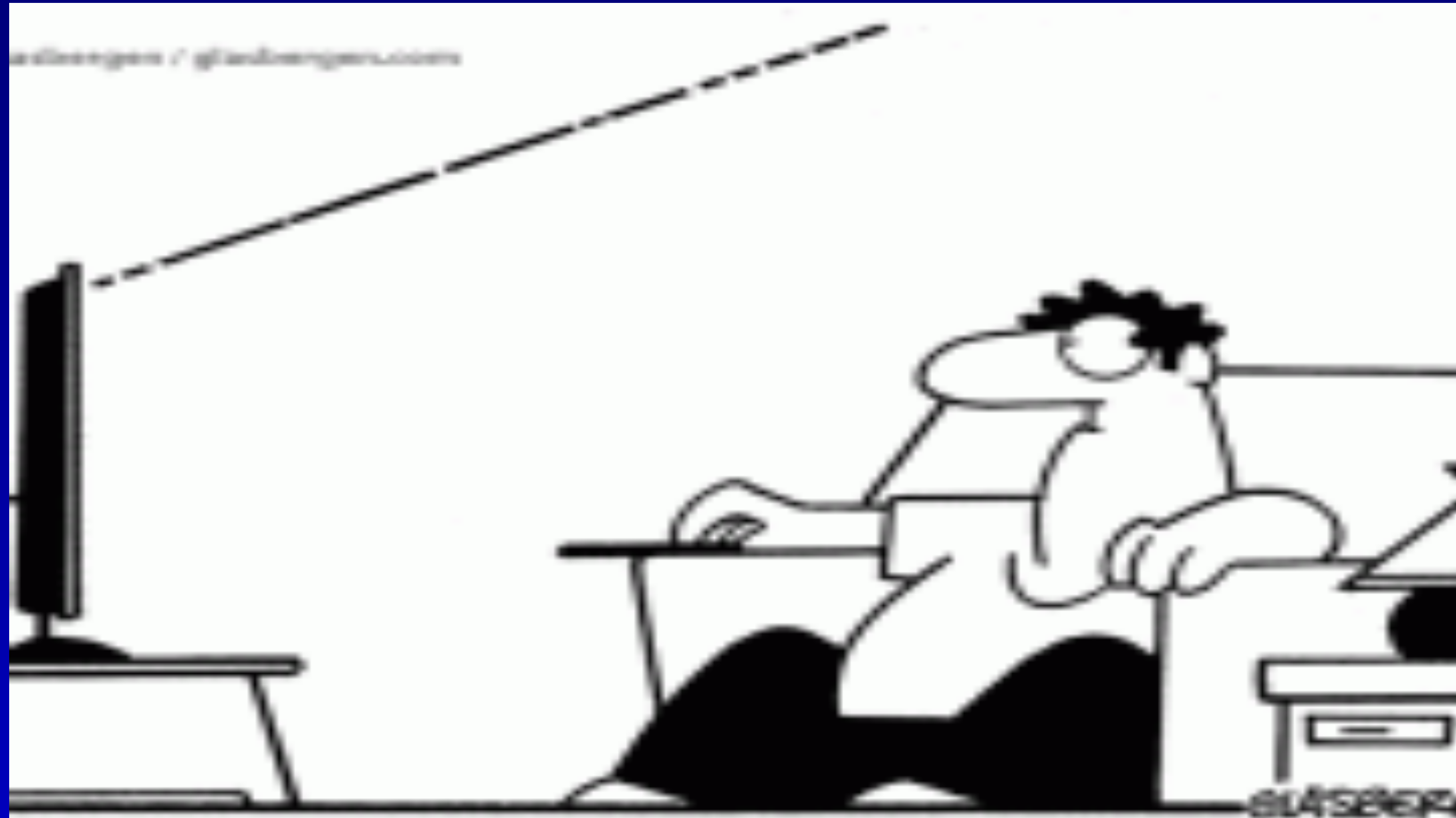
4: Avoid "pill for every ill" thinking

- 21-55% non-compliance suggests seniors don't want to take Rx regularly [*Williams, 2002*]

5: Remember the *placebo* effect/benefit

- Up to 39% improve regardless ! [*Cochrane 2010*]
- Caution when interpreting studies/"evidence" [*Why almost everything you hear about medicine is wrong. Newsweek 1/24/11*.]

Why do we take so many pills? Tonight's program is sponsored by pills: red pills, blue pills, green pills, purple pills, pills and more pills!! Ask your doctor if pills are right for you? [? George Carlin-ism]



"Tonight's program is sponsored by pills. Red pills, blue pills, green pills, purple pills! Pills, pills, and more pills! Ask your doctor if pills are right for you!"

2. High Risk (unsafe) Drugs for Seniors

- **Beers List**
  - What is it and what makes a drug eligible
  - Why is it important – who uses it
- Other drugs/classes
- *Choosing Wisely* campaign 2014

What is *Beer's List* ? [Homer Simpson's vision?]

What is Beers List?

- Dr. Mark Beers – geriatrician –first list 1991
  - Drugs which were **potentially** dangerous [in NH]
- Update published 1997 – included guideline for all seniors >65yrs; revised in 2003.
- 4th List = Update 2012 by AGS*:
  1. Meds generally to be avoided
     - 53 meds or classes of meds
  2. Meds to be avoided in certain conditions
     - 20 diseases/conditions w/ meds to avoid
  3. Meds to be used cautiously (new)

** American Geriatrics Society*

Beers List: I. Drugs/classes
(to generally be avoided)

List describes: 1) drug; 2) reason for concern; 3) severity of risk potential.

Examples:

[** = mandated *Gradual Dose Reductions* by the State]

Anti-cholinergics (& Anti-histamines)

= dry mouth, drowsiness = confusion, fall risk

- Diphenhydramine [Benadryl]
- Promethazine [Phenergan]

…Drugs/classes

Anti-arrhythmics = toxic to thyroid & lung; safer alternatives;

– Amiodarone [Cordarone]

Anti-psychotics* = increase stroke risk and mortality; minimal benefit in dementia.

– Risperidone [Risperdal], quetiapine [Seroquel]
– Haloperidol [Haldol]

Anti-anxiety* = confusion, falls/fractures, MVA

- alprazolam [Xanax]
- lorazepam [Ativan]
- diazepam [Valium]

…Drugs/classes

Anti-spasmodics = confusion; not effective?

- Dicyclomine [Bentyl]
- Hyoscyamine [Levsin]

Anti-depressants* (only tricyclics) = low BP; dry mouth, drowsiness, falls night;

- Amitriptyline [Elavil]

Hypnotics* = amnesia, falls, confusion;

- Zolpidem [Ambien]
- Eszopiclone [Lunesta]
- Temazepam [Restoril]

…Drugs/classes

- ***Hormones***
  - Estrogen [Premarin] = cancer risk; no heart protection;
  - Megestrol [Megace] = blood clot risk; minimal help
- ***Muscle relaxants*** = dry mouth, falls/fractures, confusion, ineffective
  - Carisoprodol [Soma]
  - Cyclobenzaprine [Flexeril]
- ***Anti-inflammatories*** [NSAIDs] = next slide
  - Ibuprofen [Advil, Motrin]
  - Naproxen [Naprosen]
  - ASA >325mg/day

NSAID Adverse Effects

[Non-Steroidal Anti-Inflammatory Drugs]

- Increase risk kidney failure & edema
  - maintain adequate hydration
- Increase risk GI bleed & peptic ulcers
  - Inhibits platelet aggregation
- Confusion/delirium in elders
- Avoid routine use in diabetics, in heart failure, & in elders !
  - **per AGS 2009**

* Hospice & Palliative Care Formulary USA, 2nd edition. 2008

Beers List: II. Conditions

(conditions/diseases often made worse by drug)

Heart Failure: drugs – **NSAIDs**, disopyramide [Norpace], and high sodium content drugs; concern – promote fluid retention, worsen HF; high [risk].

HTN: drugs – pseudoephedrine, diet pills, amphetamines – elevate BP; high.

Gastric/Duod.Ulcers: NSAIDS, ASA – may exacerbate or induce ulcers; high.

… Conditions

Dementia (+delirium) – *many* drugs worsen!!

- All anti-cholinergic type drugs
  - Amitriptyline, anti-spasmodics, anti-histamines
  - Incontinence – oxybutynin [Ditropan], tolterodine [Detrol], Solifenacin [Vesicare], etc.
- Benzodiazepines** [anti-anxiety]
  - Alprazolam [Xanax], etc.
- Zolpidem [Ambien], ** etc.

Beers List: III. Drugs to be used with caution !

- ASA for primary prevention
- Dabigatran [Pradaxa]
- Prasugrel [Effient] [same group as Plavix]
- TCA's, SSRI's, SNRI's [antidepressants**]

- Many drugs can still be used – but in smaller dosages and/or infrequently

Impact of Beers List

- 1999 CMS [Medicare] adopted List to evaluate quality of care in nursing homes.
  - Proposal to stop paying for PIM's [Potentially Inappropriate medicine] in LTCF in 2015
- **Conflict between geriatric/PC 'best practice' and other specialties** [e.g. cardiology - amiodarone, statins]
  - *Patients/families caught between !*

Resources for Beers List & others

- Fick DM, et al. Updating the Beers Criteria for potentially inappropriate medication use in older adults. Arch Intern Med. 2003.
- Beers M. Explicit criteria for determining potentially inappropriate medication use by the elderly. Arch Intern Med. 1997.
- Beers Criteria (Medication List): Duke Univ. Clinical Research Institute. [links to each drug]
- Beers Criteria. Wikipedia. [links s/a]
- Texas Association of Homes and Services for the Aging (TAHSA) Educational Institute on Aging

Other Drugs of Concern for Seniors
(but not on Beers List)

- PPI's [Proton Pump Inhibitors] – per AGS omeprazole [Prilosec]
  - Increase risk: c.diff. colitis; aspiration pneumonia; incidence hip fracture
  - (Use Pepcid/Zantac instead)
- Antibiotics over-used = MDRI !
- Amlodipine [Norvasc] & other CCB
  - CCB [Calcium Channel Blockers] s/e – edema, reflux/indigestion, constipation, Orthostasis
  - Tx – SBP goal 140-160 ! *[Morley]*

…other drugs of concern

- Statins (cholesterol reducers): pravastatin [Pravachol], simvastatin [Zocor], atorvastatin [Lipitor], rosuvastatin [Crestor]
  - Not recommended by AMDA for NH residents
  - Side effects [especially older seniors]: myalgias, paresthesias, confusion,
    - *The Great Cholesterol Myth: why lowering your cholesterol won't prevent heart disease [Bowden & Sinatra. 2012]*
    - *The Truth about Statins: risks & alternatives to cholesterol lowering drugs [Roberts. 2012]*
  - *[see comfortcarechoices.com website articles]*

Polypharmacy: ***Choosing Wisely***

- Campaign to avoid tests/treatments that do not benefit patients; started 2013.
- Each medical society asked to list five things we should question: beneficial ?
- The following 3 are from
  - ***American Medical Directors Assoc***. and ***American Geriatrics Society***

…Choosing Wisely

1) Don’t use sliding scale insulin for long-term diabetes management…in nursing homes.
2) Don’t prescribe antipsychotic meds for behavioral & psychological symptoms of dementia…without an assessment for an underlying cause.
3) Don’t routinely prescribe lipid-lowering meds in individuals with limited life expectancy.

3. Six Steps to Reduce Polypharmacy

How to reduce # of drugs without causing problems?

- 58% of drugs stopped [4.4 per senior], no bad outcomes. [total 70 seniors, avg.82yrs, taking avg 7.7drugs; only 2% of drugs resumed. *Garfinkel D. Arch.Int.Med. 2010*]

1. "*Is there good evidence to support using each drug for the indication given at its current dose and do the benefits outweigh all possible known side-effects?*" *- yes, no, not sure*
2. *Is the reason for using the medication valid and relevant in this patient's age group and disability level? [e.g. statins not for ages 75+]*

…Reducing Polypharmacy…

3. *Do the known possible side-effects of the drug outweigh the possible benefits in old, disabled patients? [e.g. oxybutynin]*
4. *Are there any side-effects now present that may be related to the drug?*

…Reducing Polypharmacy

5. *Is there another drug that may be superior to the one in question?*
6. *Can the dose be reduced with no significant risk?*

At each step: Yes, No, Not sure …Lead to "continue", "go to next question", "stop it".

Alabama & Medicare Regulations

- All nursing homes must follow regs
  - Regulations based on good evidence
  - Goal is best care for resident
- Must show attempts to reduce high risk drugs – ***Gradual Dose Reductions***
- Can be penalized and even shut down for failure to comply!

4. Final Personal Pearls/Points to Ponder as we (and loved ones) Age

- **Clarify your goals and treatment philosophy !**
  - Will treatment help you/them to ‘live’ or just be ‘kept alive’? What is the purpose of life?
  - What would you want if this was you in NH?
    - Who really wants to live and die in a NH??
  - What are you willing to sacrifice just to stay alive?
    - Are we prolonging/causing more suffering with the drug?
  - Treat the ‘whole person’! ‘Poly-subspecialty’ attempts to cure one organ may *cripple* the whole patient !!
- **What to do if see behavior or ADL change**:
  - stop all non-essential meds, including vitamins
  - Stop all “non-critical” meds; resume one at a time?

…Pearls

- Avoid thinking *you have to take a drug*

… evidence-based medicine helps avoid emotional decisions creating situations that cause suffering !!

… Every individual is unique – an experiment testing if the drug will help

…Everything we take has Placebo Effect –

  – 39% = placebo benefit ! *[Cochrane Review]*
    - *That's why large studies are important !*

…All drugs have side-effects! Only difference between a Rx and poison is "the dose" !

….Any symptom in a senior is a side-effect till proven otherwise !!

"Before we discuss the side effects, Mrs. Gimler, I need to know if the hormone therapy is helping your mood."

How to Improve QOL & Aging: Be informed

- Internet information – Understand Risk
  - Cardiovascular Risk Calculator – University of Edinburgh – cvrisk.mvm.ed.ac.uk/calculator
  - Bandolier - www.medicine.ox.ac.uk/bandolier/
  - Visual Rx - www.nntonline.net/

- Advance Directives & Discussions
  - OneSlideProject – engagewithgrace.org

…Improve *Aging*: Be informed

Other information

- ***Being Mortal*** – Dr. Atul Gwande
- ***Comfortcarechoices.com*** – R.Webb's website w/ info about EOLC, palliative care choices, links to other sites
- *It's Ok to Die* – website [Dr. Monica Williams Murphy]
- *Patient/Physician Decision Aids* –

  www.npc.nhs.uk/patient_decision_aids/pda.php

Beyond Beers - Other Tools to help:

START – Screening tool to Alert doctors to Right Treatment

STOPP – Screening tool of Older Person's Prescriptions

MAI – Medication Appropriateness Index

[Finally…] Can Drugs cause miscommunication?

Thank You !

As you slide down the banister of life, may all the slivers point down!

- Maxine

So, enjoy yourself while you can !