Can Prescriptions be Dangerous for Seniors?

Learning in Retirement

UNA, Florence, AL

Nov.8, 2013

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Disclaimer & Quiet Reminder

- Please place pagers and cell phones on mute or vibrate.
- Ask burning questions any time – get what you want out of today!

Disclaimer Statement

- I have no financial COI/affiliation disclosures
- There are no unapproved medication usages

Confessional Bias Statement

I believe Seniors are often over-treated/ medicated. Fewer drugs usually improves their quality life—as well as quantity of years!!

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

Will Rogers said…

- There are 3 kinds of men. 1) The ones who learn by reading. 2) The few who learn by observation. 3) The rest of them have to pee on the electric fence for themselves.
- Never kick a cow chip on a hot day.

What I hope you might learn today

- What's considered a high risk drug
  - Do you want to know about your own drugs?
  - Some of these drugs can still help us live more comfortably !!
  - Is it possible for someone to take no pills?
- There is a process for stopping unnecessary drugs.
  - How do you decide when a pill is necessary?

And, provide you info to help you:

- Be a critical thinker – question options and avoid potentially futile care/suffering for you [and your family]
- Be more active in managing your health – create a 'therapeutic relationship' with your doctor

Outline *

- General Guidelines for Drug Therapy in Srs
- What is 'risk': the *Illusion of Certainty* is unsafe
- High Risk (unsafe) Drugs for Seniors
  - **Beers list** and others
  - Polypharmacy & steps to reduce it
  - Drug Safety
- Goal-focused care for seniors improves safety – Is your goal to take more pills?
- **Pearls & Points to Ponder [stimulate discussion]**

* can skim over any part of this depending on your interests and questions; these slides will be on my website *comfortcarechoices.com* !

1. Guidelines for Safe Drug Therapy

Foundations for Decision-Making

1)First, do no harm

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

6)Providers have a stewardship responsibility

Palliative Care may be Safer

Foundation 1: First, do no Harm !

- Evidence why should we be concerned
  - –Srs = 13% population; take 30% Rx *[Williams,2002]*
  - –25% of ADE in those >80yr resulted in admissions *[Williams]*
  - –14-52% srs take at least 1 inapprop. med *[McLeod]*
  - –23% community elders on 1 Beers medication [Buck]
  - –$1 on drug Rx triggers $1 for iatrogenic illness
- Srs are physiologically different

Polypharmacy [>4 Rx] is harmful

Why are drugs a Problem for Srs?

Physiologically, elders not "just older adults":

- Usually several chronic diseases
- Physiology changes:
  - Impaired/slower drug metabolism in liver
  - Decreased renal function = poor drug clearance
  - Changes in fat and blood distribution
- Increased brain sensitivity

Which leads to:

More side-effects from drugs

- More falls and fractures
- More confusion/delirium
- More nausea, constipation or diarrhea
- JUST FEEL WORSE !!

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

Feisty seniors !

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]*
- 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.*]

Foundation 6: Stewardship in Healthcare

- Stewardship: "A [fiduciary & ethical] responsibility to take care of something one does not own." - patient/physician role?
  - 2011, MC spent 1/3 of budget [$170B of $554B] on last 6mo life
- Stewardship implies avoiding things which are non-beneficial/futile for another person !
- *Choosing Wisely* campaign in America – e.g. "statins" for seniors over 70, and particularly >85.

[Futile Care: care which will not help a patient reach their goal; or, when the risks outweigh the benefit]

2. **Avoiding the *Illusion of Certainty***
Why? Because it's unsafe !

"In this life, nothing is certain but death & taxes"

- Franklin's Law

"There are three kinds of lies: lies, damn lies, and statistics !"

- Disraeli

Comfort-focused thinking (Palliative Care) Reduces the Illusion of Certainty

What is PC:

1) Helps patients clarify their goals in the face of a LLD*, to make informed decisions and avoid non-beneficial treatments;
2) Helps those with life-limiting disease live comfortably (soothing symptoms) as long as possible [i.e. sometimes years]; plus
3) when they are at the very end of life, PC ensures a natural death w/ comfort and dignity.

*LLD = Dementias, cancers, end-stage organ disease (e.g. lung/ heart/renal/liver), ALS

PC's Beneficial Impact [Safer] on "First, do no Harm"…

- PC improves survival & QOL in lung cancer
  - Patients receiving chemotherapy and PC lived 3mo longer (11.6mo v 8.9mo) than those on just chemoRx. *[Temel. NEJM 2010.]*

and…

…PC's Impact

- Pts who choose hospice live ~29 days longer than those not in hospice
  - * *Connor S. Comparing hospice & non-hospice patient survival among patients who die within a three-yr window. J Pain Symptom Manage 2007*
- Cancer pts who discuss EOLC wishes w/ MD have better QOL & lower costs in final wk of life
  - Less aggressive care/admissions to hospital
  - Improved QOL w/ more peaceful death

  ** Zhang B. Health care costs in the last week of life. Arch Intern Med. 2009*

Comfort-Focused Care's Positive Impact: why?

Implementing PC principles can help:

- –Stop most (all?) non-comfort tx/meds
- –Aggressively control symptoms which helps them to feel better and eat/socialize/exercise more and fight illness
- –Encourage patient/family-driven goals
  - •Avoid futile/unnecessary treatment & hospitalizations
- –Encourages EOLC planning that confronts the *illusion of certainty*…

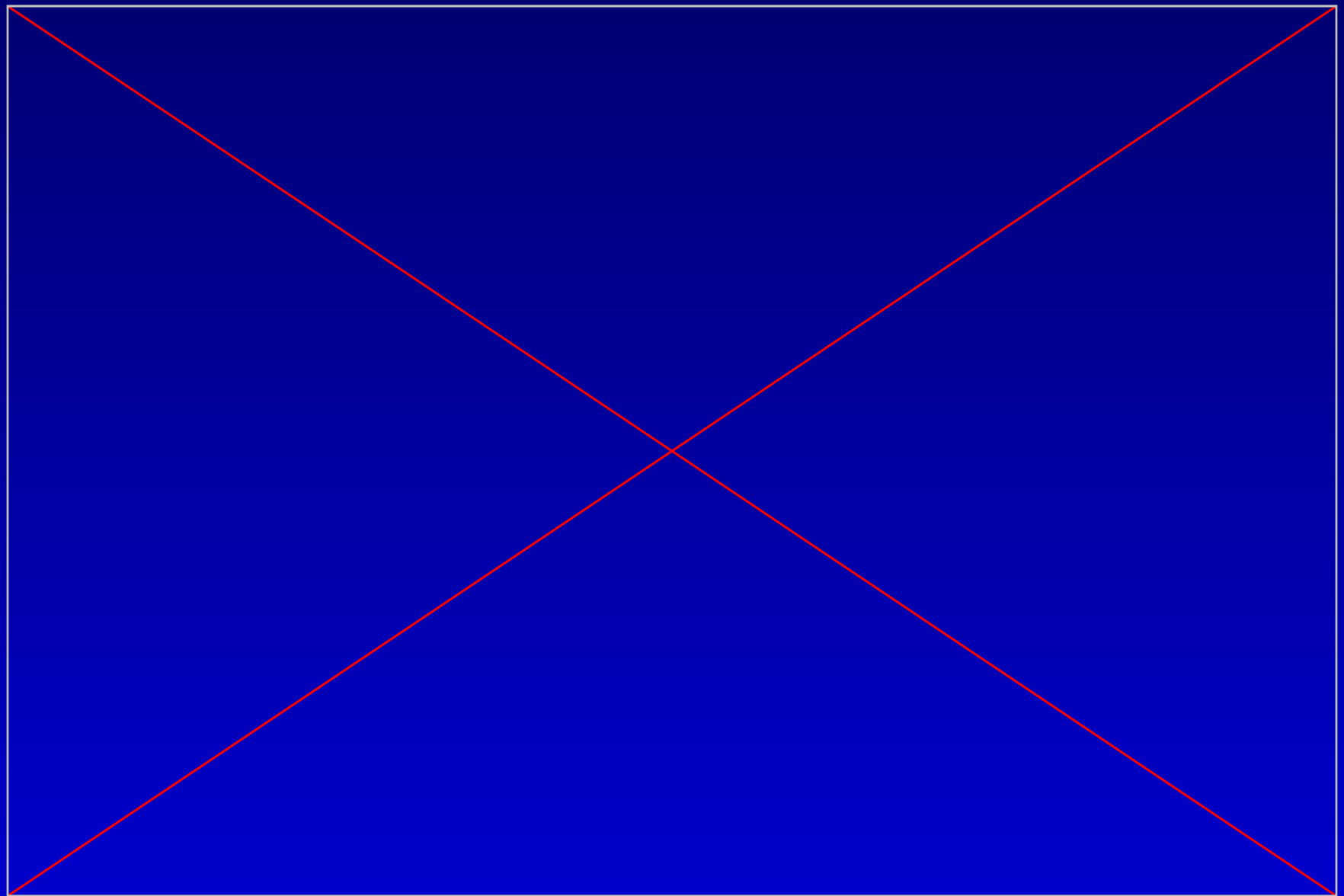
What's the Illusion of Certainty?

- Some people want "Illusion of Certainty"
  - Ignoring reality is unsafe !
- Illusion of Certainty: the belief that an event is absolutely certain although may not be ! Examples:
  - Treatments have only benefits but no harm
  - There's only one best treatment
  - A diagnostic test is absolutely certain

But, in reality…

- "In this life, nothing is certain but death & taxes"- Franklin's Law
- All real world events are uncertain
- Every healthcare decision is one between several risks, not between a certainty and a risk
  - ***All attempts to do good, also generate unwelcome side-effects …!!***

Rx for Side-effects !



Communicating Risk …

- **"Risk"** [*the possibility of harm*] is an uncertainty that can be expressed numerically (via probabilities & frequencies)

- **Forms of Risk Communication**:
  - Probabilities [confusing]
    - Single event probability
    - Conditional Probabilities
  - Natural Frequencies [less confusing]

Communicating Risk …poorly

"The bad presentation of medical statistics such as the risk associated with a particular intervention can lead to patients making poor decisions on treatment."

- it is a failure to communicate effectively, leading to misinterpretations and problems …

* G.Gigerenzer. Simple tools for understanding risks. BMJ 2003;3:621


whatever happened to our sexual relations?
I don't know. I don't even think we got a Christmas card from them this year.
parodyville.com

Communicating & Common Sense:

- Public has right to clear information
- If guidelines being debated, that usually indicates ***uncertainty*** !! e.g. HR Therapy, Vit.D, *[Newsweek 1/24/11]*

- How to do this? Question what you are told!! Using statistics in form of 'natural frequencies' to explain risks…

Three ways to present statistics:

- Relative Risk Reduction [RRR]
  - Typical newspaper and many journal articles
  - Worst method, misleading
- Absolute Risk Reduction [ARR]
  - Much better
- Number Needed to Treat [NNT]
  - Perhaps easiest to understand

…Definitions of stats

- Relative Risk Reduction (RRR):
  - Measures the effect of treatment relative to number people improved/saved - e.g. 71%
- Absolute Risk Reduction (ARR):
  - Measures the effect of treatment in terms of absolute number people improved/saved – e.g. 2%
- Number Needed to Treat (NNT):
  - number of people who need to be treated to improve/save one – e.g. 50

…Example

Real World Example:

Benefits & Risks of Treatments to Reduce CVA Risk in A.Fib.

How much does warfarin or ASA actually reduce the risk of having a stroke or cause a major bleed from the drug used?

[* Hart RG. Ann Intern Med 2007. Taylor FC. BMJ 2001.]

Benefits of Warfarin v. ASA (in A.Fib)

Treatment — Risk of CVA

- No treatment: 3.5% avg. (1-18%: CHAD2 risk score 0-6)

- ASA: - decreases risk 3.5 to 2.5% = **1%** (ARR)
  - RRR is improved rate relative to original rate x100 [2.5/3.5 x100] = **37%** (RRR)
  - NNT = 100 (100/1)
- Warfarin: decreases risk ~2% (ARR)
  - RRR [1.3/3.5 x100] = 71% (RRR)
  - NNT = 50 (100/2)

but, increases Bleeding Risk ~1%

3. High Risk (unsafe) Drugs for Seniors

- **Beers List**
  - What is it and what are the criteria
  - Why is it important – who uses it
- Other drugs/classes
- Polypharmacy

What is Beer's List ? [Homer Simpson's idea?]

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:

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
  - –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]
- 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.
- Medical-legal – List could be used against MD or facility [e.g. *inappropriate Rx* if patient falls]
- Conflict between geriatric/PC 'best practice' and other specialties [e.g. cardiology - amiodarone, statins]
  - *Patients/families caught between !*

Resources for Beers List

- 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]
- Medication Management and Polypharmacy. Beers List. www.tahsa.org [Texas Association of Homes and Services for the Aging - 2 helpful tables]

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

- PPI's [Proton Pump Inhibitors] – omeprazole [Prilosec]
  - Increase risk: c.diff. colitis; aspiration pneumonia; incidence hip fracture
  - (Use Pepcid/Zantac instead)
- Antibiotics over-used !
- Amlodipine [Norvasc] & other CCB
  - CCB [Calcium Channel Blockers] s/e – edema, reflux/indigestion
  - Tx – SBP goal 130-160 ! *[Morley]*

…other drugs of concern

- Statins (cholesterol reducers): pravastatin [Pravachol], simvastatin [Zocor], atorvastatin [Lipitor], rosuvastatin [Crestor]
  - Side effects [especially older seniors]: muscle aching, numbness hands/feet, 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]*

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?*

…Reducing Polypharmacy…

3. *Do the known possible side-effects of the drug outweigh the possible benefits in old, disabled patients?*
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".

[handout]

Drug Safety Pearls

- Don't flush down sink/toilet
  - Narcotics/opioids – hospices may flush [for security reasons]
  - Do dispose with container in garbage, taped
- Use weekly pill reminder-container
- Check Rx when pick up from pharmacy
  - Correct drug, dose, quantity
- If taking drug "as needed" [e.g. not every day, or "some"/day], keep a log book

4. Drugs & Goal-focused Care

- Why are goals important
- What do seniors/families want
- How to choose goals and avoid futile care

Why Goal-Focused Care?

Goal-Focused care means choose only that care which will help reach a goal!

Why set goals for our medical care?

- Care goals shape expectations & priorities
- Goals may be dependent on understanding risks & benefits of options and on prognosis
  - BUT, if we haven't discussed the goal and prognosis, how can we establish an appropriate plan of care and obtain an informed consent?

What do Patients & Families with Serious Illnesses Want [their goals?]

- Pain and symptom control
- ***Avoid inappropriate prolongation of the dying process***
- Achieve a sense of control
- ***Included in decisions & to be listened to***
- ***Honest information***
  - Everyone wants adverse event info [1/100,000 - Ziegler. Arch Intern Med 2001]

* *Singer et al. JAMA 1999;281(2):163-168.*

* *Tolle et al. Oregon report card.1999 www.ohsu.edu/ethics*

How to Choose Goals

1) Clarify status & prognosis of condition & treatment options
2) Identify goals for both patient & family !!
   - The same? Can adult children accept what's best for parent? Trouble letting-go? (What would they want for themselves?)
   - Is goal comfort or longevity?
3) Will pills help reach goals?
   - * See "how to reduce polypharmacy"
4) Goals may change w/ more info or as disease progresses !

5. Final Pearls/Points to Ponder

- **Clarify your goals and treatment philosophy !**
  - What's your life's purpose?
  - When would you say "enough" or "stop" ?
  - Will treatment help you to 'live' or just be 'kept alive'?
  - What are you willing to sacrifice just to stay alive?
    - Will life be as good as, better, or worse, with the treatment? And…
  - Will the drug/treatment get you back to where you were or want to be?
  - Treat the 'whole person', not just the disease !
- **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*

  …All drugs have side-effects !

  …Everything we do has Placebo Effect –

  – 39% = placebo benefit ! *[Cochrane Review]*

    - *That's why large studies are important !*

  – Evidence Based Medicine can help avoid emotional decisions which lead to us creating situations that cause suffering

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

- OASIS – Older Adult Specialty Inpatient Service
  - ECM initiative offering inpatient comprehensive assessment and family education, for seniors w/ multiple problems
- **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 Decision Aids* –

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

Thank You !

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

- Maxine

Grow'n old ain't for sissies !

- Betty Davis

So, enjoy yourself while you can !

Why considered a Problem Drug?
– more detailed examples

- Amiodarone [Cordarone]
  - Pulm.fibrosis/interst.pneumonitis [10-17%],
  - Arrhythmias [torsades]; abn.LFT [?fatal]; thyroid hyper/hypo; n/v, fatigue;
  - Drug interactions – digoxin, warfarin, statins
- Diazepam [Valium] + [chlordiazepoxide, clorazepate]
  - Long T 1/2: depression, dependence, sedation, confusion, falls, fractures, incontinence