# PRUNING THE PILLS

## A DEPRESCRIBING STRATEGY FOR ADDRESSING POLYPHARMACY

Forum on Aging in Rural Oregon
Chinook Winds, Lincoln City
May 3, 2019

# Disclosure

- Your presenters have no financial interests in any of the products to be discussed in this presentation.
- Your presenters do not necessarily endorse any of the products to be discussed in this presentation.
- The opinions expressed do not necessarily reflect those of our respective employers.
- Yes, we are using someone else's format for this presentation

# What is polypharmacy anyway?

- No universally accepted definition
  - *Some publications use numbers as low as ≥2 prescription medications*
  - *Many studies do not include over-the-counter medications or supplements*
- Most commonly accepted definitions
  - *Polypharmacy: ≥5 prescriptions*
  - *Major polypharmacy: ≥10 prescriptions*
    - *Bo Hovstadius, Gören Petersson, "Factors Leading to Excessive Polypharmacy," Clinics in Geriatric Medicine, 28:159-172 (2012)*

# Is polypharmacy really a problem?

- Drug-drug interactions increase exponentially
  - *With five medications, potential interactions are approximately $2^5 = 32$*
  - *With ten medications, potential interactions are approximately $2^{10} = 1,024$*
- Prevalence
  - *In one meta-analysis 24% of long-term care residents were on ≥9 medications, 14% on ≥10 medications*
    - *Bruce Tamura, et al, "Factors Associated with Polypharmacy in Nursing Home Residents," Clinics in Geriatric Medicine, 28:199-216 (2012)*

# Regulatory interlude

"…[W]e understand that hospice care is a process by which a patient, who knows and accepts the nature of hospice care at the beginning of a stay, comes to accept the implications associated with it….[W]e expect that the full understanding of the nature of hospice care provided to the beneficiary or representative by the hospice will include an explanation that in electing the hospice benefit, palliative care is being elected in lieu of curative care."

"As noted in the proposed regulation, we believe that the unique physical condition of each terminally ill individual makes it necessary for these decisions to be made on a case by case basis. It is our general view that the waiver required by the law is a broad one and that hospices are required to provide virtually all the care that is needed by terminally ill patients."

48 FR 243:56010 (1983)

# Regulatory interlude

"Our regulations at § 418.54(c) stipulate that the comprehensive hospice assessment must identify the patient's physical, psychosocial, emotional, and spiritual needs related to the terminal illness and related conditions, and address those needs in order to promote the hospice patient's well-being, comfort, and dignity throughout the dying process. The comprehensive assessment must take into consideration the following factors: the nature and condition causing admission…; complications and risk factors that affect care planning; functional status; imminence of death; and severity of symptoms (§ 418.54(c)). The Medicare hospice benefit requires the hospice to cover all reasonable and necessary palliative care related to the terminal prognosis, as described in the patient's plan of care. The December 16, 1983 Hospice final rule (48 FR 56008) requires hospices to cover care for interventions to manage pain and symptoms. Additionally, the hospice Conditions of Participation (CoPs) at § 418.56(c) require that the hospice must provide all reasonable and necessary services for the palliation and management of the terminal illness, related conditions and interventions to manage pain and symptoms. Therapy and interventions must be assessed and managed in terms of providing palliation and comfort without undue symptom burden for the hospice patient or family. In the December 16, 1983 Hospice final rule (48 FR 56010 through 56011), regarding what is related versus unrelated to the terminal illness, we stated: '. . . [W]e believe that the unique physical condition of each terminally ill individual makes it necessary for these decisions to be made on a case-by-case basis. It is our general view that hospices are required to provide virtually all the care that is needed by terminally ill patients.'"

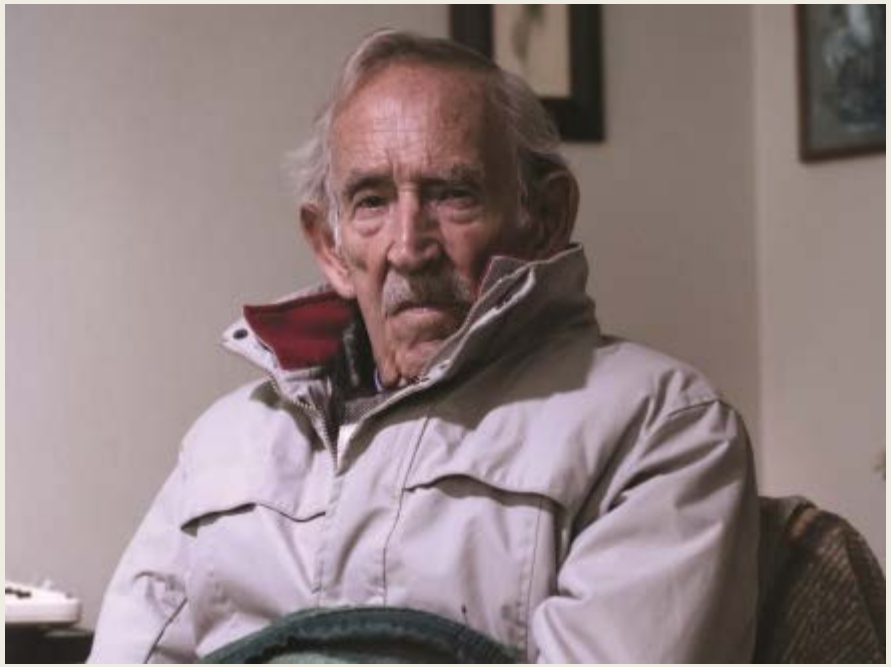
80 FR 151:47145 (2015)

# Is polypharmacy really a problem?

- Unpublished hospice medical review data
  - *Convenience sample, N=46*
  - *Mean 9.2 medications*
  - *Median 8.5 medications*
  - *Standard deviation 5*
  - *Range 1-25*
    - The patient with 25 medications was admitted for cardiorenal syndrome.
    - Another patient with hepatorenal syndrome was “only” on 18.

# Adverse drug events in the elderly

- In one population-based study, adverse drug reactions accounted for 6.5% of all emergency department visits.
  - Bruce Guthrie, *et al*, "The rising tide of polypharmacy and drug-drug interactions: population database analysis 1995-2010," *BMC Medicine*, 13:74 (2015)



# Adverse drug events in the elderly

- ED visits for adverse drug reactions for patients ≥ 65 years old 9.7/1000 in 2013-14
  - *Compared with 5.2/1000 in 2005-06*
  - *Compared with 3.1/1000 for patients <65 years old*
- Hospitalizations for adverse drug reactions for patients ≥ 65 years old 4.2/1000 in 2013-14
  - *Compared with 0.6/1000 for patients <65 years old*
    - *Nadine Shehab, et al, "US Emergency Department Visits for Outpatient Adverse Drug Events, 2013-2014," JAMA, 316:20:2115-2125 (2016)*

# Adverse drug events in the elderly

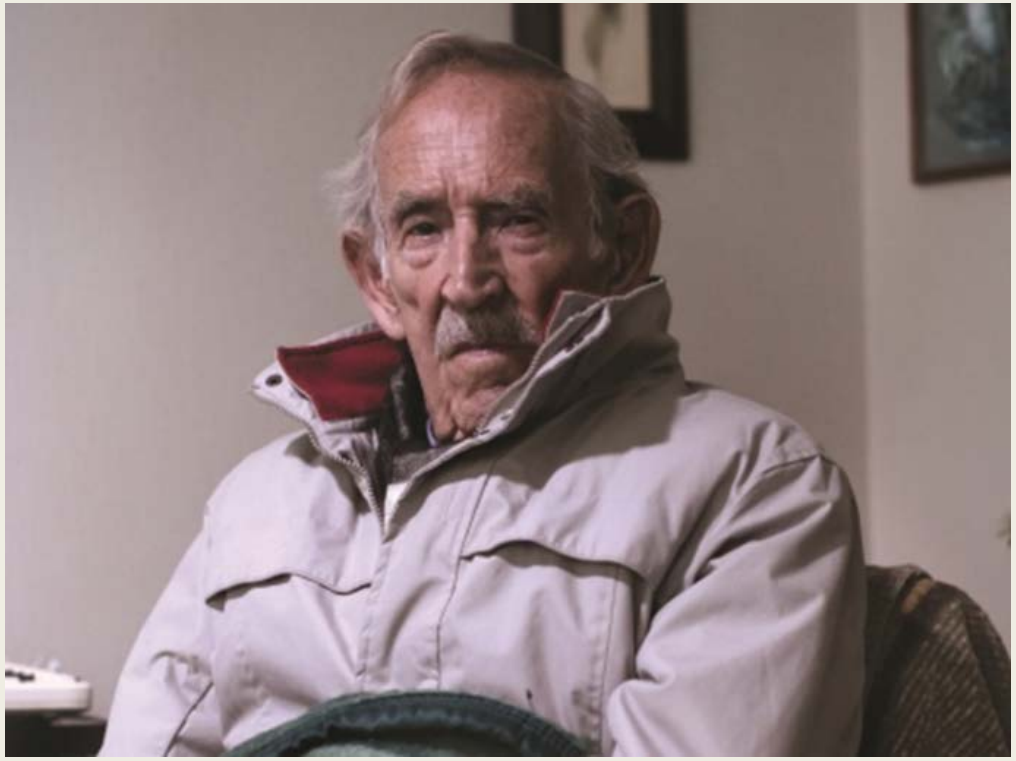
- Most commonly implicated drugs
  - *Anticoagulants (warfarin, rivaroxaban, dabigatran, enoxaparin)*
  - *Diabetes agents (insulin, metformin, glipizide, glyburide, glimepiride)*
- Beers criteria are a helpful guide but of limited utility for identifying the patients at highest risk
  - *Only 3.4% of ED visits involved drugs on the "potentially inappropriate" list*
  - *Only 1.8% of ED visits involved drugs on the "always avoid" list*
    - *Nadine Shehab, et al, "US Emergency Department Visits for Outpatient Adverse Drug Events, 2013-2014," JAMA, 316:20:2115-2125 (2016)*

# Who is at risk for polypharmacy?

- Risk factors
  - *No consistent association with age, gender, race, or for-profit/not-for-profit facility status*
  - *Residents with more comorbidities tend to be on more medications*
  - *Residents with dementia tend to be on few medications*
  - *Number of prescribing physicians consistently associated with number of medications*
    - *Bruce Tamura, et al, "Factors Associated with Polypharmacy in Nursing Home Residents," Clinics in Geriatric Medicine, 28:199-216 (2012)*

# Who is vulnerable to the impact of polypharmacy?

- Risk factors
  - *Age ≥80 years*
  - *Living in a "deprived" area*
  - *Living in a residential care facility*
    - *Bruce Guthrie, et al, "The rising tide of polypharmacy and drug-drug interactions: population database analysis 1995-2010," BMC Medicine, 13:74 (2015)*



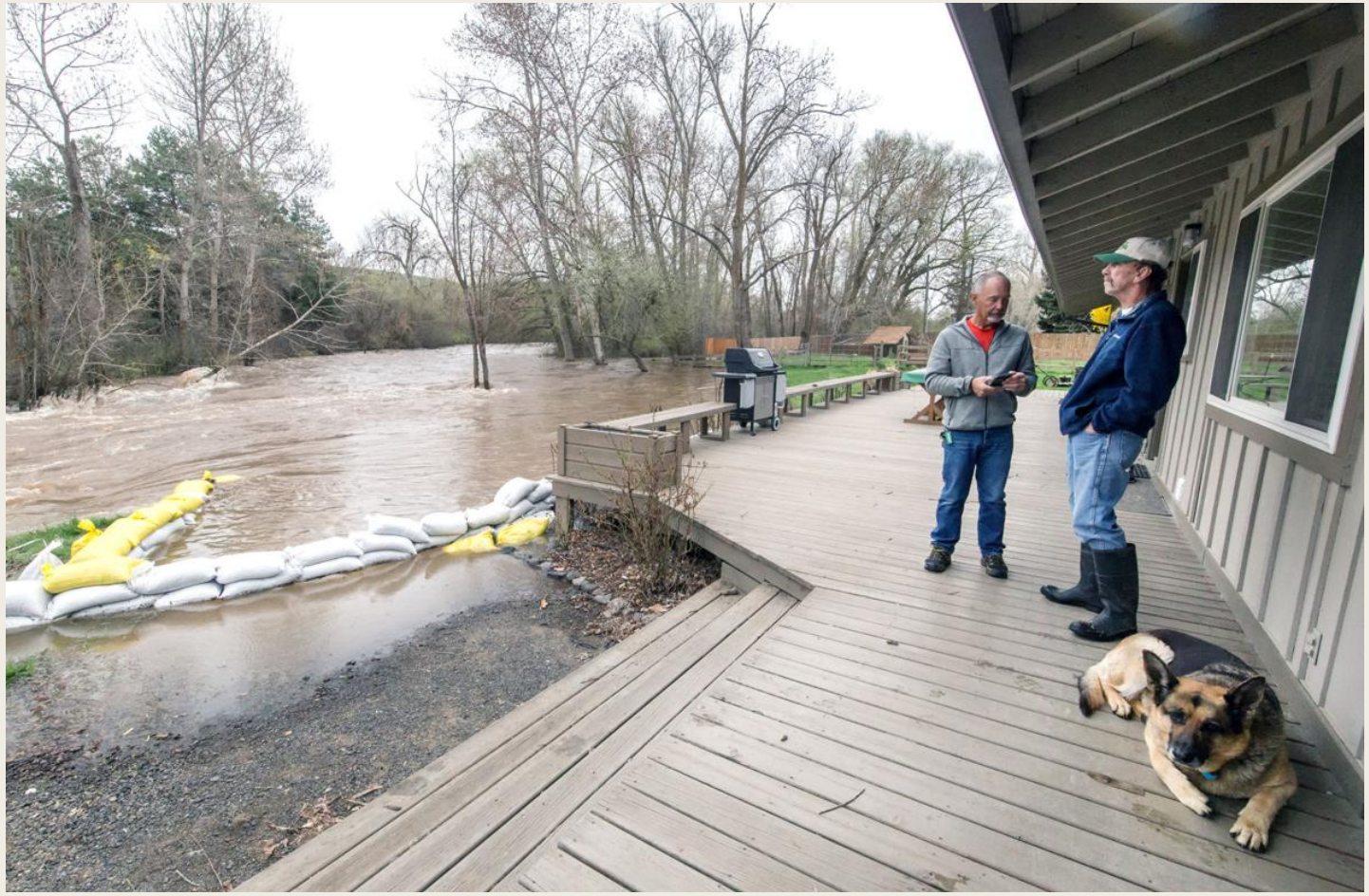
# How does polypharmacy happen?

- Too many cooks?
  - *The primary physician may or may not be aware of what consultants are prescribing*
  - *Consultants are unaware of what other consultants are prescribing*
  - *Then there are the hospitalists, the ER physicians, and facility standing orders*
- Guidelines (which may or may not be pertinent)
  - *Many are shifting toward more aggressive treatment with multi-drug regimens but rarely address when it is time to stop*

# How does polypharmacy happen?

- Legacy prescribing
  - *“But Dr. Knower, she was taking her Alendronate/Simvastatin/Warfarin/ Amiodarone before she went into the hospital!”*
  - *With EHR, it is too easy to cut and paste medication lists without taking a close, critical look first*
- Prescribing cascade
  - *The patient/resident is experiencing side effects from previous medication(s), so let’s add another medication to treat the side effects*

# How do we stem the polypharmacy tide?



# Deprescribing

- The term first appeared in Australia in 2003, but as with polypharmacy, there is no universally accepted definition
- "Deprescribing is the process of the withdrawal of an inappropriate medication, supervised by a health care professional with the goal of managing polypharmacy and improving outcomes."
    - Emily Reeve, *et al*, "A systematic review of the emerging definition of 'deprescribing' with network analysis: implications for future research and clinical practice," *British Journal of Clinical Pharmacology*, 80:6:1254-1268 (2015)

# Deprescribing:  salient concepts

- A process, not an event
- Professional supervision
- Realistically, polypharmacy is managed
  - *Total elimination is probably wishful thinking*
- Improved patient/resident outcomes is our goal

# Identifying inappropriate medications

- *Primum non nocere*
- Start with the Beers list of potentially harmful medications
  - *Pocket card for $7.99, https://geriatricscareonline.org/ProductAbstract/2019-ags-beers-criteria-pocketcard/PC007*
  - *As noted in the published paper, J Am Geriatr Soc 00:1-21, 2019, most of the work was completed by September 2018*
  - *There were some late-breaking guideline changes not included in the publication*

# Likely inappropriate medications

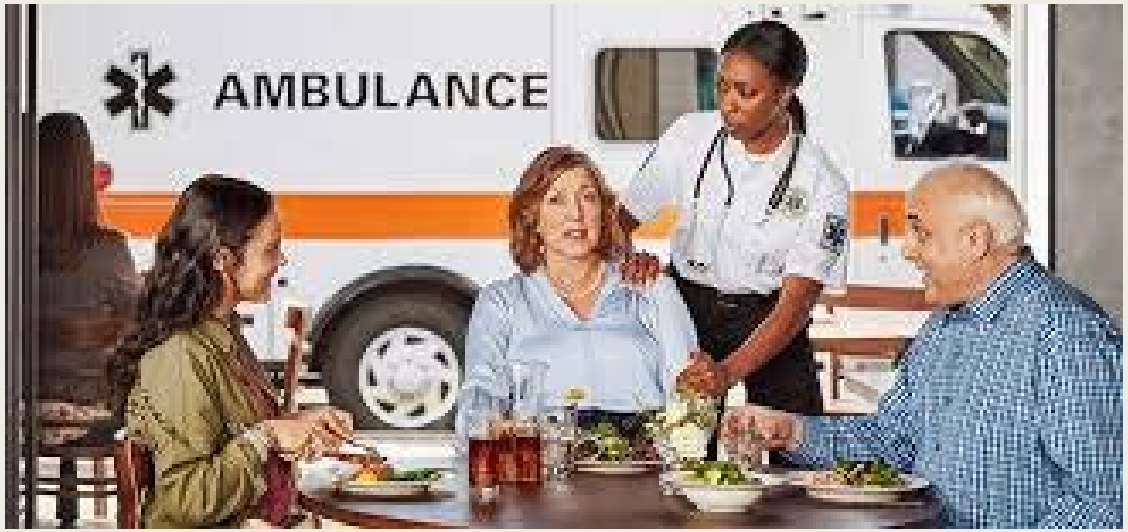
- Drug classes best avoided
  - *Anticholinergics*
  - *Tricyclic antidepressants*
  - *Benzodiazepines and "Z drugs"*
  - *Proton-pump inhibitors*
  - *Non-selective non-steroidal anti-inflammatory drugs*
  - *Muscle relaxants*

# Identifying inappropriate medications

- Is the medication (still) appropriate?
  - *High-risk or low-risk?*
    - Have I compared the $CHA_2DS_2VASc$ score with the HAS-BLED score for my anticoagulated patient/resident with atrial fibrillation?
    - Do I need to rethink the relative benefit and risk when he starts falling down frequently?

# Identifying inappropriate medications

- Do the trials on which recommendations and practice patterns are based apply to my patients/residents?
  - *Exclusions for age*
  - *Exclusions for multiple morbidities*

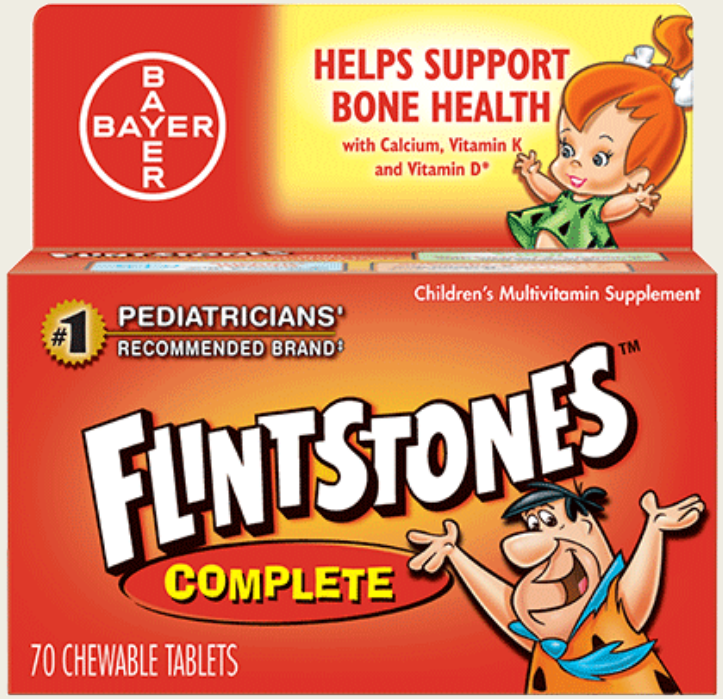


# Identifying inappropriate medications

- Is the medication (still) appropriate?
  - *Effective or ineffective?*
    - Docusate is ineffective for controlling or relieving constipation
      - *Yoko Tarumi, et al, "Randomized, Double-Blind, Placebo-Controlled Trial of Oral Docusate in the Management of Constipation in Hospice Patients," Journal of Pain and Symptom Management, 45:1:2-13 (2013)*

# Identifying inappropriate medications

- Is the medication (still) appropriate?
  - *Necessary or unnecessary?*
    - Vitamin/mineral supplements
    - Calcium kills
      - *Fan Chen, et al, "Association Among Dietary Supplement Use, Nutrient Intake, and Mortality Among U.S. Adults," Annals of Internal Medicine, doi: 10.7326/M18-2478*



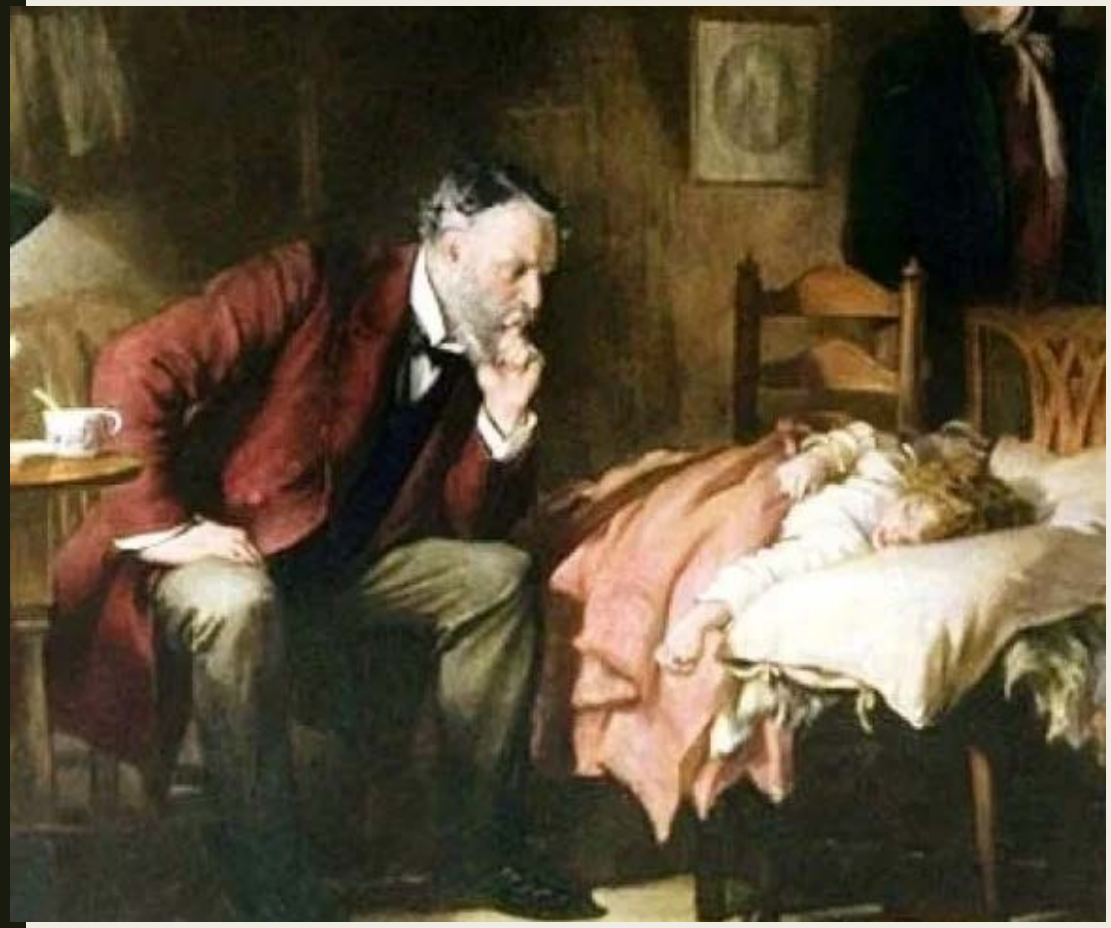
# Considerations in the deprescribing process

- Now that we have identified, and hopefully discontinued, unnecessary and potentially harmful medications, what about remaining medications?
- What is the current route of administration?
  - *If oral, are there alternatives?*
- What is the patient's/resident's prognosis?
  - *How long until he or she is no longer able to swallow?*

# Considerations in deprescribing

- Does this medication come with a built-in “tail”?
  - *Alendronate stays in the bone matrix for 4-5 years*
- Can it be safely stopped, or does it need to be tapered?
  - *Rapid taper or slow taper?*
- Does this medication have a withdrawal syndrome?
  - *If the withdrawal syndrome is severe (e.g. Venlafaxine), and if a long taper is needed, should start thinking about tapering sooner rather than later*

# Under professional supervision

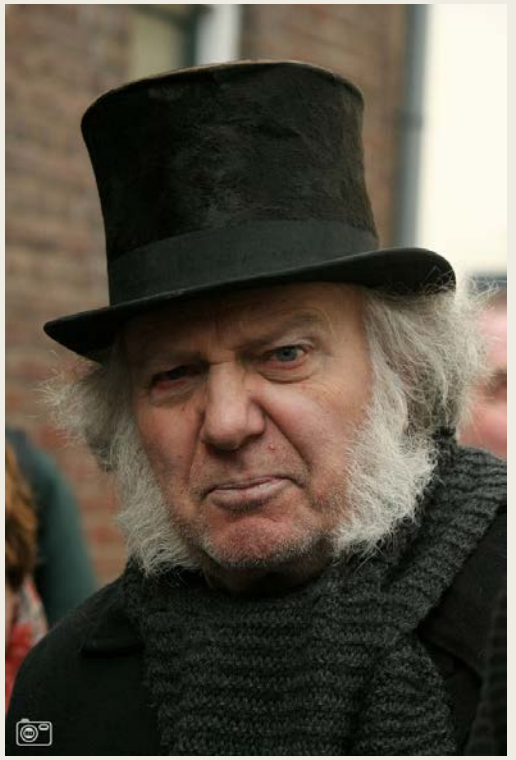


# Opportunities for deprescribing

- Hospital admission
- Hospital discharge
- Care facility admission
- Hospice admission

# Challenges to deprescribing

- The process may be misinterpreted as withholding beneficial treatments for ulterior motives
  - *“You’re just trying to save money out of your budget!”*
  - *“You just want her to die sooner!”*



# Strategy suggestions

- Improved patient/resident outcomes is our goal
- Involve the patient and family in the discussion
- Eliminate medications that are harmful, were never effective to begin with, or are no longer necessary
- Be able to explain why these medications are harmful, were never effective to begin with, or are no longer necessary
  - *Know your stuff*
  - *Being able to present evidence may be important, but*
    - Don’t overwhelm
    - Don’t bludgeon

# Challenges to deprescribing

- Therapeutic inertia
  - *“But that was prescribed for…”*
  - *“But he’s been on that for years.”*
- Fear of hastening progression
  - *“But if we stop that, her Alzheimer’s will only get worse.”*
- Fear of secondary disease processes

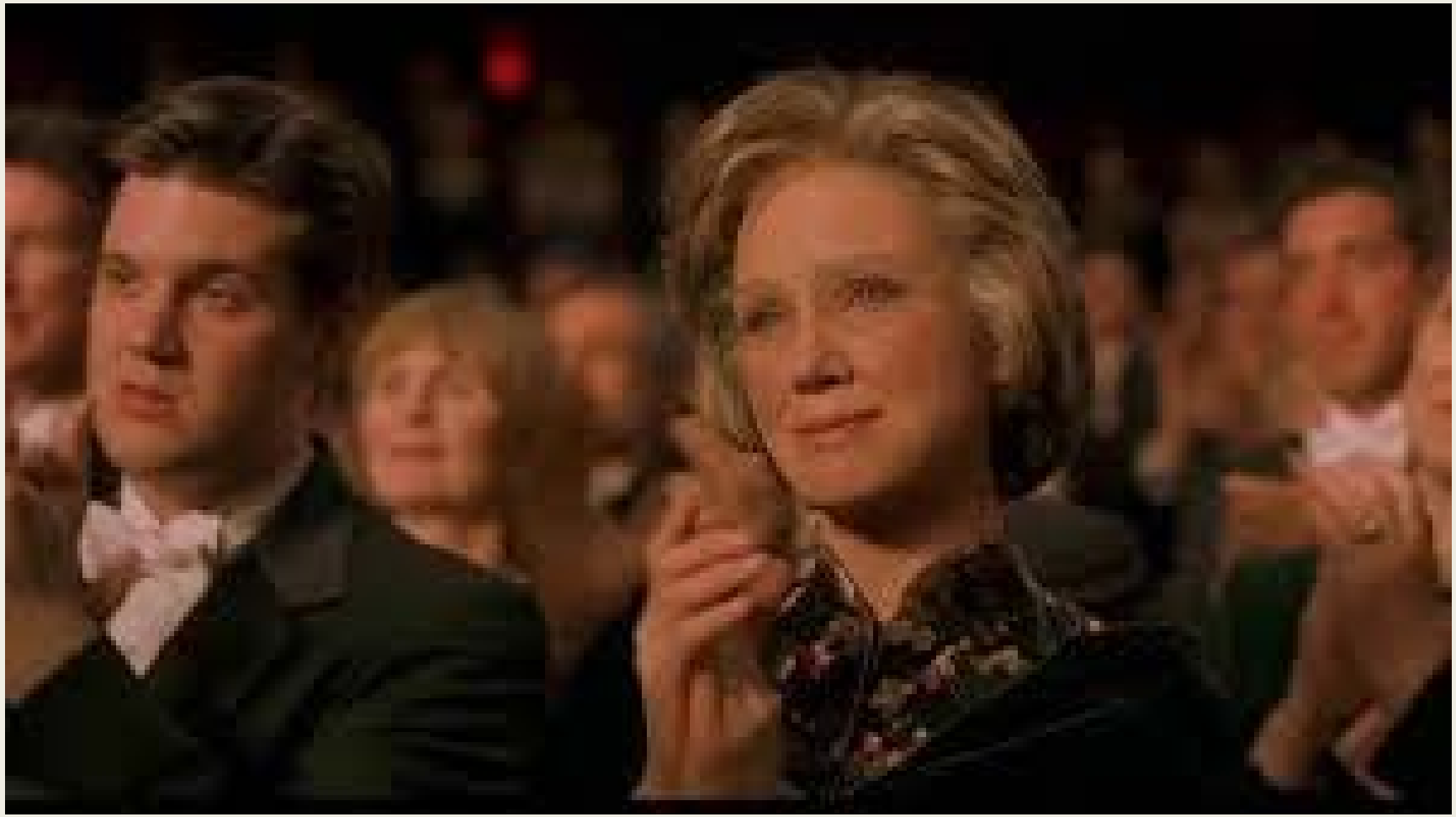
# Strategy suggestions

- Involve the patient and family in the discussion
- Recognize their concerns
- Offer information
  - e.g. Richard Kennedy, *et al*, "Association of Concomitant Use of Cholinesterase Inhibitors or Memantine With Cognitive Decline in Alzheimer Clinical Trials," *JAMA Network Open*, 2018:1(7):e184080
- Try to put things in perspective
- Choose your battles
- Look for teachable opportunities

# Summing it all up

- Use no more medications than necessary for your patients' medical needs
- Go straight home from this conference, and review all med lists!
- Eliminate or taper down doses of harmful, unnecessary, or ineffective medications
- Recheck the medication list on a regular basis
- Individualize treatment plans
- Involve patients and families in the process

# Thunderous Applause!!



# For future reference


- Lisa Honsvick, RN, DNS
  - *Work: Lisa.Honsvick@prestigecare.com*
- Michael Knower, MD, HMDC, FAAHPM
  - *Home: dr_moses@crestviewcable.com*
  - *Work: meknower@stcharleshealthcare.org*