



**UNIVERSITY OF SOUTH FLORIDA
GERIATRIC WORKFORCE
ENHANCEMENT PROGRAM
(GWEP)
FACULTY
DEVELOPMENT
MASTERWORKS
SERIES**

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OCCAM'S RAZOR REVISITED: MEDICATION, MENTATION, AND MOBILITY- GERIATRIC SYNDROMES



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USF GWEP PRESENTATION
JUNE 23, 2017

PRESENTATION OBJECTIVES:

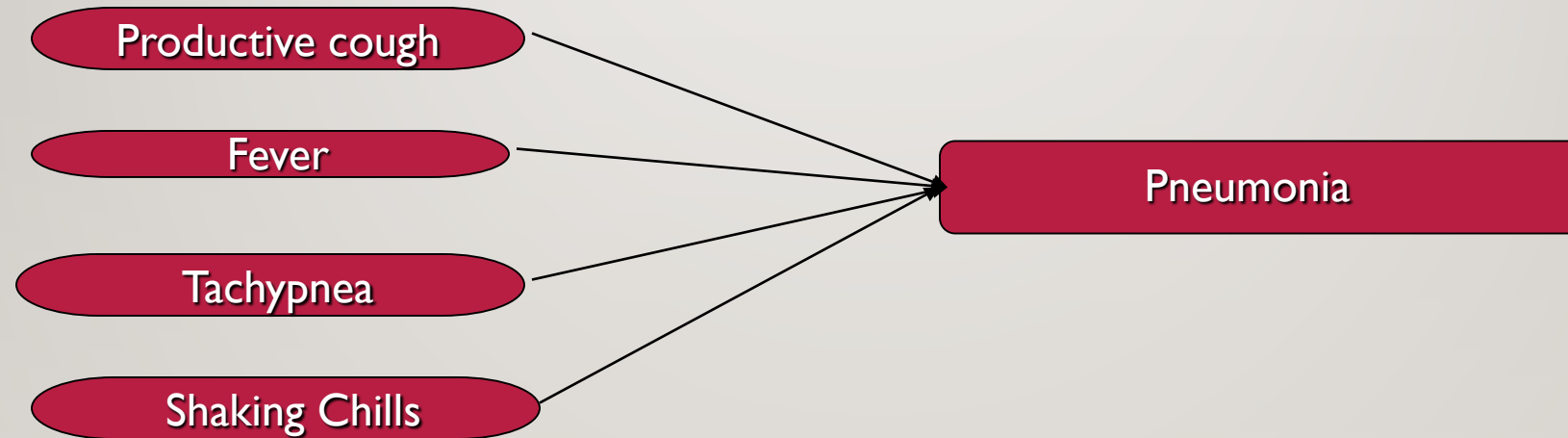
After this presentation, the participant will be able to:

- * Define a Geriatric Syndrome
- * Describe the interaction between medications, mentation, and mobility in older adults
- * Formulate a rationale for a “geriatric approach” to evaluation and management of the older adult post fall

OCCAM'S RAZOR

- The law of parsimony
- *Among competing hypotheses, the one with the fewest assumptions should be selected*
- In medicine- when diagnosing a given injury, ailment, illness, or disease a doctor should strive to look for the fewest possible causes that account for all the symptoms
- "when you hear hoofbeats, think horses, not zebras"

OCCAM'S RAZOR



- “Plurality must not be posited without necessity”
- Law of Parsimony of Diagnosis

DEFINITION: “SYNDROME”

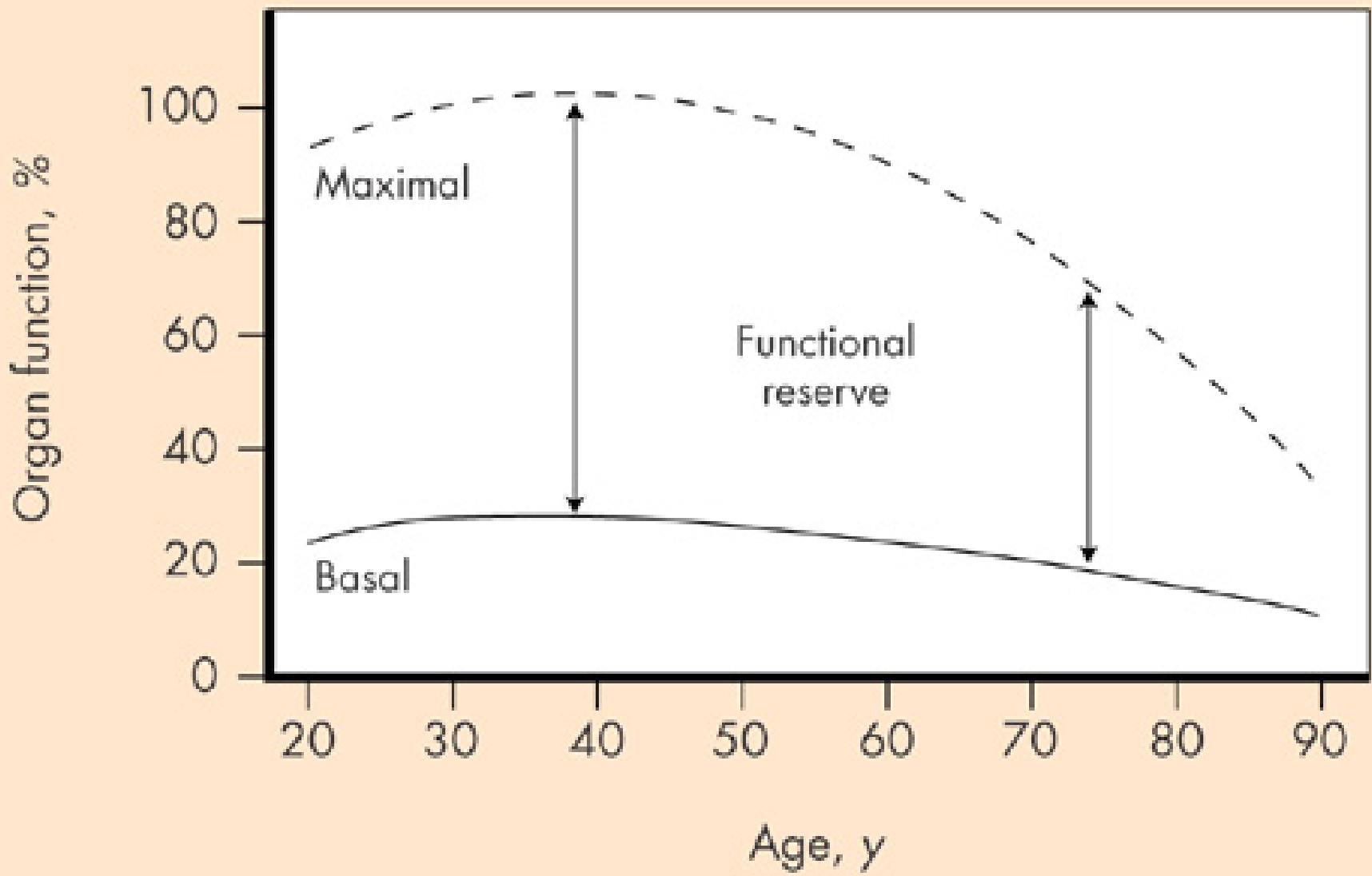
- ★ a group of symptoms that together are characteristic of a specific disorder, disease, or the like
- ★ the pattern of symptoms that characterize or indicate a particular condition
 - ★ Ex.: Parkinson’s Syndrome, Cushing’s Syndrome, Congestive Heart Failure

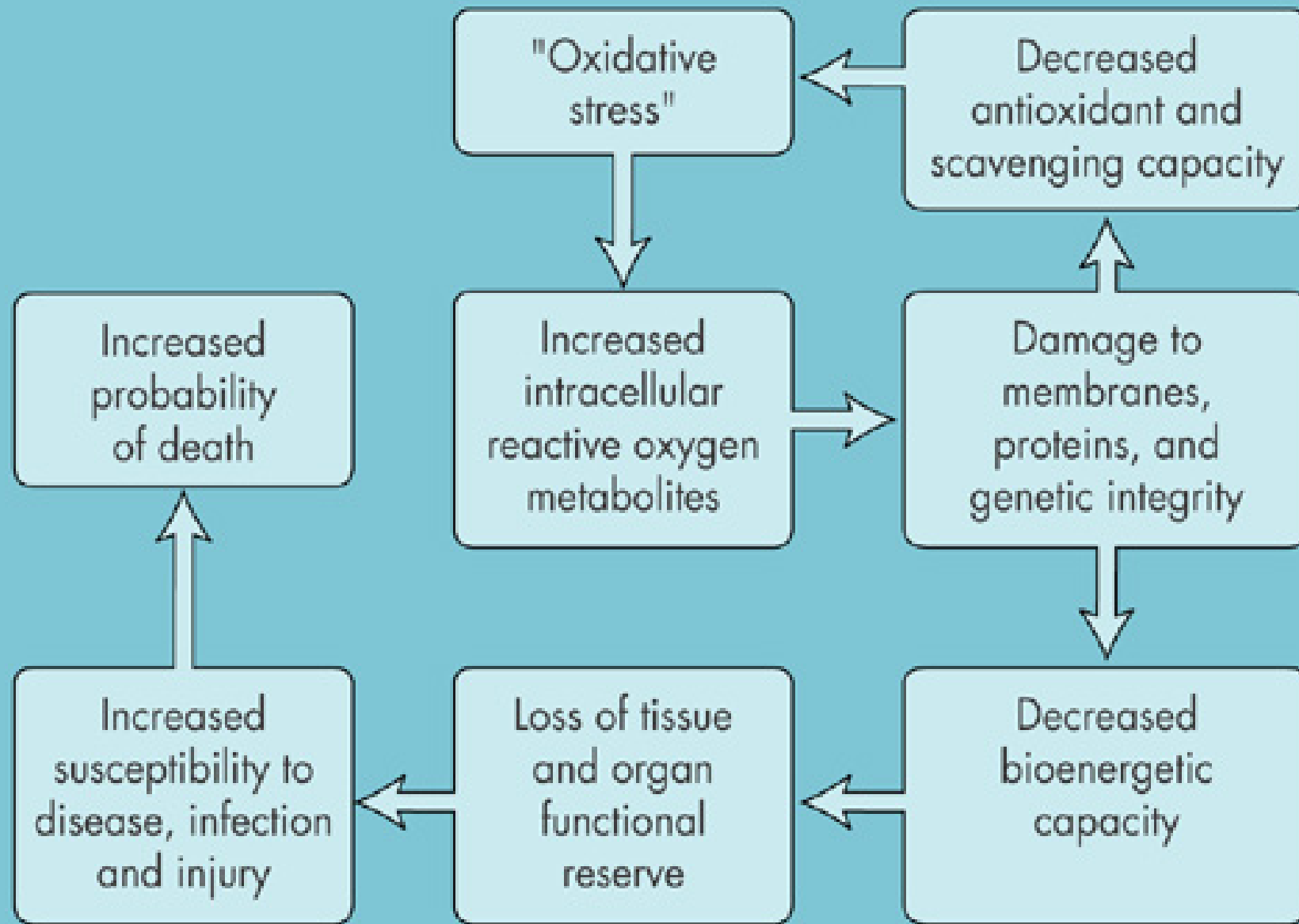
AGING

1. Physiologic changes of aging
 - ★ diminished *reserve* capacity of organs and organ systems
2. Cumulative effects of trauma, (wear and tear) over time
 - Chemical, mechanical, physical
 - Oxidative damage
 - Mitochondrial DNA mutations
3. Accumulation of residual effects of acute and chronic diseases

AGING

- Diminished homeostatic reserve capacity of all organ systems called **homeostenosis**
- In the absence of significant stressors, homeostenosis causes no symptoms and very few restrictions on routine activities
- Progressive risk of homeostatic failure with increasing age





GERIATRIC SYNDROME

“Geriatric Syndromes are multifactorial health conditions that occur when the accumulated effects of impairments in multiple systems renders a person vulnerable to situational challenges.”

Tinetti, Williams and Gill; Dizziness among Older Adults: A Possible Geriatric Syndrome; Ann Intern Med. 2000;132:337 - 344

GERIATRIC SYNDROMES

- Dementia
- Delirium
- Depression
- Polypharmacy
- Urinary Incontinence
- Gait Disturbances/Falls
- Dizziness
- Hearing Impairment
- Visual Impairment
- Osteopenia/osteoporosis
- Eating Problems
- Malnutrition
- Pressure Ulcers
- Sleep Problems
- Frailty

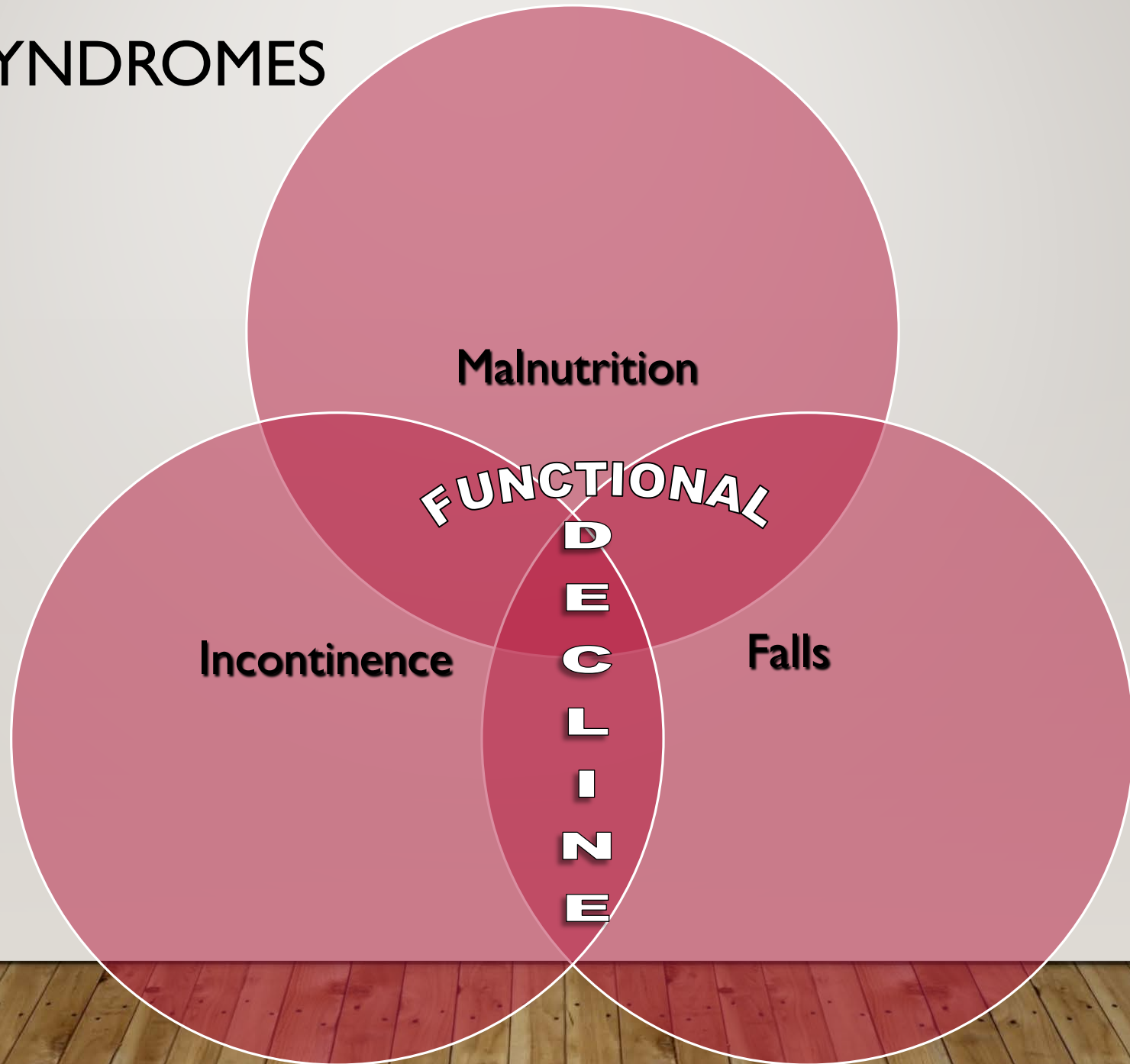
GERIATRIC SYNDROME CHARACTERISTICS

- Multifactorial etiologies
- Common risk factors among the syndromes
- Intimate association with functional impairment /decline
- Association with increased morbidity and mortality

Characteristic: Multifactorial Etiology



GERIATRIC SYNDROMES



CONSIDER A CASE

- Mrs. A, a 78 year old woman presents to the emergency room having been brought in by EMS after being found on the floor outside of her bathroom by her daughter.
- ER evaluation show that she has sustained a right inter-trochanteric fracture of the femur.
- What do you do now?

MRS. A PROBLEM LIST

- HTN
- DM 2
- Osteoporosis
- Osteoarthritis
- Memory loss
- Anxiety
- Insomnia
- Stress urinary incontinence, chronic

MRS. A MEDICATION LIST

RX

- Metformin 1000mg BID
- Glyburide 5mg QAM
- Lisinopril 10mg QAM
- Diazepam 10mg BID
- Donepezil 5mg daily
- Oxybutinin 10mg BID

OTC

- Naproxen 500mg BID prn joint pains
- Tylenol PM qhs for sleep
- Vitamin D 2000 U daily for bone health
- Aspirin 325mg daily for heart health
- Co Q10 200mg daily for heart health
- Ginko biloba and ginseng because Dr. Oz says they are good for you

MRS. A ADMISSION VITALS/LABS

- BP 112/56, P 80, RR 16, T 98.2
- Hgb/Hct 10.6/31
- Urinalysis: + ketones, + blood, +I bacteria
- BUN 40
- Creatinine 1.42

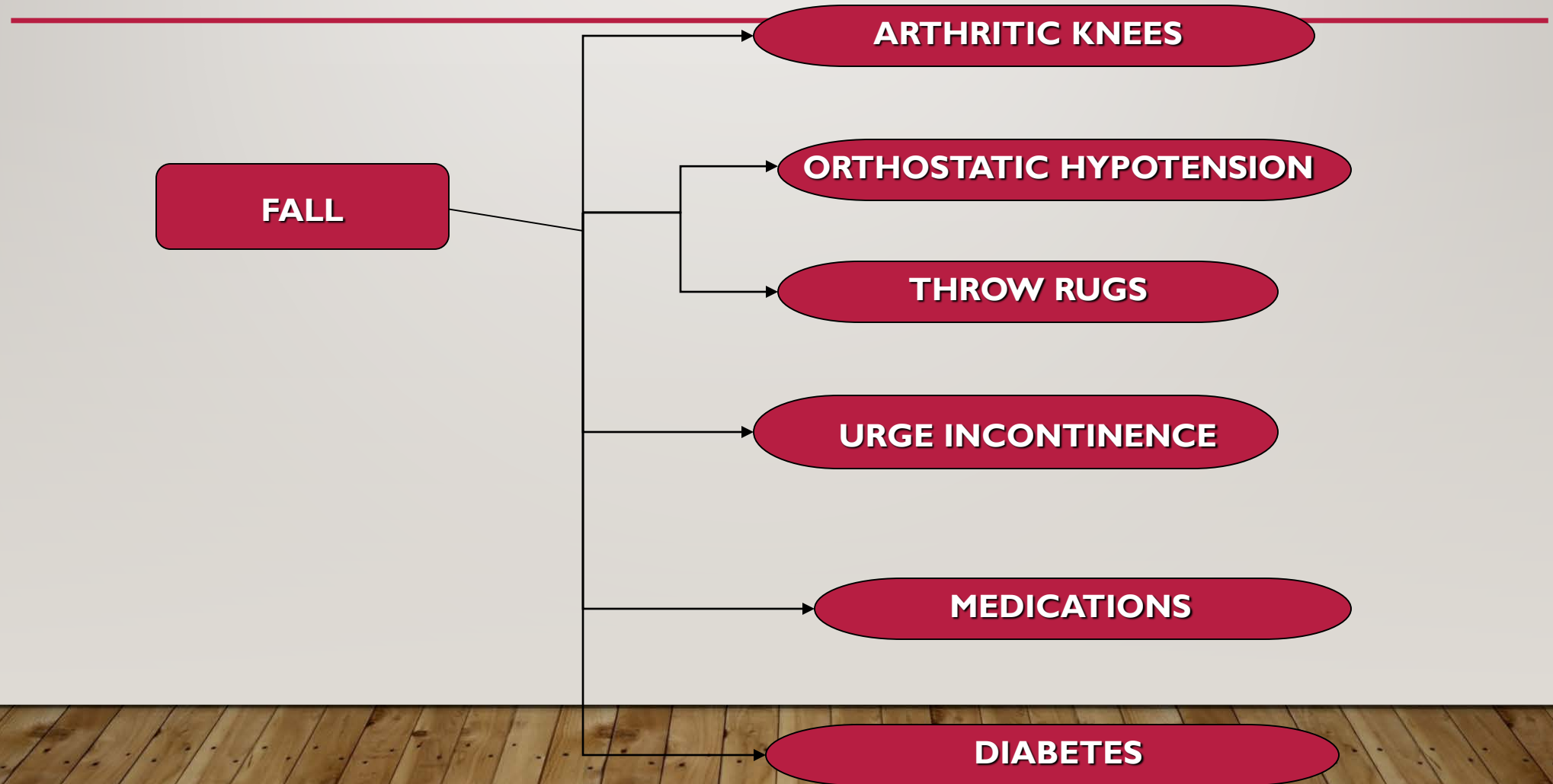
STANDARD MEDICAL APPROACH

- Continue home med list, except DM meds- switch to SSI
- Cardiac clearance for ORIF
- Monitor post-op pain control
- Treat the bacteriuria with antibiotic
- Watch for delirium
- Discharge to SNF for rehab

LET'S RECONSIDER.....

- Why did Mrs.A fall?

GERIATRIC SYNDROME



WHAT SHOULD BE ADDRESSED- MEDICATIONS

- Chronic long-acting benzodiazepine
- Multiple anticholinergics (oxybutynin, diphenhydramine)
- Glyburide- excessive risk of hypoglycemia
- Aspirin dose
- NSAID use
- Unnecessary OTCs

WHAT SHOULD BE ADDRESSED-MENTATION

- Why is she taking donepezil, low dose?
- Does she have Alzheimer's dementia?
- Delirium?
- Is she safe living alone?

WHAT SHOULD BE ADDRESSED- MOBILITY

- Does she have diabetic neuropathy?
- How does her osteoarthritis affect her gait/balance?
- Does she have/need/use an assistive device? Is it appropriate?
- Does she exercise regularly?

HICKAM'S DICTUM

- Patients can have as many diseases as they d#\$* well please.

GERIATRICISED MEDICAL APPROACH

- Evaluate Geriatric Syndromes
 - Incontinence ameliorated; Bedside commode ordered
 - Get-up-and-Go: PT and Rx of appropriate assistive device
 - Cognition evaluated, MoCA 25/30
 - Anti-hypertensive treatment modified; orthostatic hypotension reduced
 - Next fall averted, fracture prevented

***Am J Med. 1997;A randomized trial of office-based screening for common problems in older persons. Moore, Siu, et al.**