

What Would a Geriatrician Do?

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Disclosure

- No conflicts
- Tend to use the term “older adult” in my discourse
- Hope to have an impact on the care of older adults at MUSC and across the state

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Learning Objectives

- Participants will be able to describe how a geriatrician might:
 - Work with an older adult who has fallen
 - Think about risk with older adults who require surgery (and their families)
 - Evaluate and care for an older adult with delirium

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Principles of Geriatrics:
Evaluation, Management, and Decision Making

- Conventional approach to diagnosis and treatment often not optimal for older adults:
 - Age related changes and condition-condition interactions add complexity
 - Many distressing symptoms cannot be ascribed to a single disease
 - Diagnostic test characteristics differ in older adults with multiple conditions
 - Older adults vary in how they value potential health outcomes
 - With older adults, there are often many other interested parties, especially if cognitive impairment is present

S. Strassman et al. Trends in Patient's Geriatric Medicine and Gerontology, 8th Ed., page 135-140

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Mrs. Smith Has a Fall

- 84 year old woman with history of HTN and CAD who takes metoprolol, aspirin, and atorvastatin at home, fell while walking from her car into a store.

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Falls in Older Adults: Background

- 1 / 4 older adults fall each year, but less than 50% tell their provider
- Falling once doubles chances of falling again
- 1/5 falls cause serious injury (fractures, head injury)
- 800,000 hospitalizations per year
- 300,000 hip fractures
- \$31 billion annually
- Fall complications are highest cause of injury death in older adults, >180/100,000 in men ≥ 85 years old

CDC: Older Adult Falls

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What Happened? Relevant history?

- Details of the fall event?
- Baseline functional status?
- Were there contributing factors? Acute illness?
- Could it have been prevented?
- Was it a spurious event, or part of a longer term pattern?

Note: **Multiple contributing factors for most falls**

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Contributing Factors

- **Intrinsic**
 - Age
 - Neurologic impairment
 - Dementia
 - Neuropathy
 - Stroke
 - Parkinson's, or other
 - Cardiovascular disease
 - Orthostatic hypotension
 - Low cardiac output
 - Musculoskeletal disease
 - Spinal stenosis
 - Degenerative arthritis
- **Extrinsic**
 - Environmental factors
 - Home trip hazards
 - Pets
 - Stairs, especially without handrails
 - Weather issues
 - Darkness
 - Rain
 - Snow / ice
 - Medications

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Medications that Increase Fall Risk

- Antidiabetic agents
- Beta-blockers
- Alpha-blockers
- Calcium channel blockers
- Antiarrhythmics
- Diuretics
- Diuretic combinations
- Benzodiazepines
- Hypnotics
- Antipsychotics
- Sedating antidepressants
- Opioids
- Central analgesics
- NSAID's
- Anticholinergics
- Anticonvulsants

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Acute Management

- Care for injury (injuries)
- Care for patient with the injury
- Pain control
- Address patient and family concerns
- Prevent complications:
 - Functional decline
 - Delirium
 - Skin injury
 - Infection

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Recovery

- Physical: What is it going to take to heal?
- Functional: What is it going to take to recover function? How much function can be recovered?
- Emotional: Address concerns, worries, fears. Understand patient goals and preferences.
- Family: What will they need to be successful in caregiving role? What else do they need?

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Prevention (Falls and Injuries from Falls)

- Primary:
 - Maximize overall health, home safety, safe behaviors
 - Avoid / limit medications that increase fall risk
 - Exercise: 5 component of regimen
 - Maximize bone health
 - Vitamin D prevents falls and fractures (up to 20% reduction in long term care settings)
- Secondary
 - Same as above, plus correct any identifiable contributing factors
- Vitamin D / Osteoporosis
 - Only 20% of hip / wrist fracture patients get evaluated / treated p DC

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Mrs. Smith Has a Surgical Problem

- In the emergency room, Mrs. Smith was found to have an acute intertrochanteric fracture of her right hip. She was admitted for surgical repair of the fracture. You are asked to participate in her care.

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Pre-operative assessment

- Cognitive and Behavioral disorders
- Cardiac evaluation
- Pulmonary evaluation
- Functional / Performance status
- Frailty
- Nutritional status
- Medication management
- Patient counseling
- Preoperative testing

ACLS/ACQIP/AGS BEST PRACTICE GUIDELINES: Optimal Preoperative Assessment of the Geriatric Surgical Patient

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Operative considerations

- Anesthesia: No single “best” plan, must be patient specific
- Medication and volume management
 - Limit non-essential medications, but continue important ones
 - Continue b-blockers, statins, ASA in high risk patients
 - Avoid withdrawal syndromes
 - Fluid management considers effects of aging, injury, and medications
- Procedure itself

Colburn, J. L., McHenry, S., and Burstin, J. R. (2007). Surgical Guidelines for Perioperative Management of Older Adults: What Geriatricians Need to Know. *J Am Geriatr Soc*, 45(1), 1230-1246. doi:10.1111/jgs.14877

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Bridging the Gap

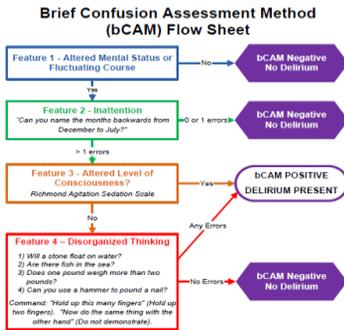
- What is important to the patient and family?
- Do they understand their problem?
- Do they understand the proposed plan of care?
- Do they understand what it will take (and how long) to get better, and hopefully recover their baseline function?
- Do they have the capacity to go through what they will need to go through in order to get better, if that is the primary goal?

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Mrs. Smith is Confused

- After a thoughtful preoperative assessment and careful management, Mrs. Smith underwent surgery to repair her hip. She did well in the operating room, but 12 hours after arriving back in her room, the nurse calls to inform you that Mrs. Smith seems confused, and had a positive delirium screen with the b-CAM.

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 The Brief Confusion Assessment Method (bCAM) is adapted from:
 Ely EW, et al. JAMA. 2001; 286: 2703-2710. Confusion Assessment Method for the Intensive Care Unit. Copyright © 2002, Vanderbilt University.
 Inouye SK, et al. Ann Intern Med. 1990; 113: 941-948. Confusion Assessment Method.
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Delirium: Definition

- Acute change in mental status:
 - Decreased attention or awareness
 - Change from baseline cognitive function
 - Waxing and waning over time
 - May include:
 - Illusions, hallucinations, dysphasia, dysarthria, motor abnormalities, disorientation
 - May be hyperactive, hypoactive, or mixed

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Delirium: Importance

- 10-31% of have delirium on admission
- As high as 80% in the ICU
- Postoperative delirium:
 - General surgery, 5-10%
 - Orthopedic surgery, as high as 42%
- For patient admitted with delirium, mortality rate 10-26%
- For patients develop delirium during hospital stay as high as 22-76%, with high rate of death in months following discharge
- For patients who survive, frequently do not recover baseline cognitive status

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Non-modifiable Risk Factors

- Dementia or cognitive impairment
- Age > 65
- History of delirium, stroke, neurological disease
- History of falls, gait disorder
- Multiple comorbidities
- Male sex
- Chronic renal or hepatic disease

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Potentially Modifiable Risk Factors

- Sensory impairment
- Immobilization
- Medications
- Acute neurologic states
- Acute illness
- Metabolic derangement
- Surgery
- Environment
- Pain
- Emotional distress
- Sustained sleep deprivation

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Delirium: Causes

- D Drugs
- E Eyes, ears, and other sensory deficits
- L Low O2 states (MI, stroke, PE)
- I Infection
- R Retention (urine or stool)
- I Ictal state
- U Under-hydration / nutrition
- M Metabolic causes (glucose, Na, other)
- (S) Subdural hematoma

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Delirium Prevention: HELP

- Daily visitor / Orientation
- Therapeutic activities (cognitive stimulation)
- Early mobilization, including range-of-motion, minimizing restraints
- Vision protocol
- Hearing protocol
- Oral volume repletion / feeding assistance
- Sleep enhancement

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Approach to Older Adult with Delirium

- See patient and confirm “delirium” diagnosis, and type
- Evaluate for possible treatable causes, treat as indicated
- Institute non-pharmacologic measures (same as prevention)
- Involve family when possible (a familiar face)
- For patients who are severely agitated, and danger to themselves, lowest dose possible neuroleptics
- For patients at risk for alcohol or benzodiazepine withdrawal, then benzodiazepines first line

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Involving the Family

- Delirium in a loved one is a scary experience, especially the first time it happens:
 - Explain what is going on and why
 - Explain what you are doing to diagnose and treat the situation
 - Explain how they can help
 - Explain that is a serious concern, and is being addressed seriously
 - It will take time to see improvement, and a longer time to know if there will be long term issues
 - Provide resources and answer questions

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Mrs. Smith: Summary

- Older woman who fell, broke her hip, and then had delirium while she was in the hospital. We:
 - Thought about reasons for her fall, and how we could help reduce her chances of future falls
 - Talked with her and her family about the need for surgery, and what to expect, including rehabilitation needs after surgery
 - Worked to minimize risk of delirium
 - Evaluated her acute agitation, made diagnosis of delirium, worked with the care team to manage her agitation, and educated her family.

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References

- Geriatrics Review Syllabus: A Core Curriculum in Geriatric Medicine, 8th Ed.
- Hazzard's Geriatric Medicine and Gerontology, 6th Ed.
- CDC website: Older Adult Falls
- ACS NSQIP®/AGS BEST PRACTICE GUIDELINES: Optimal Preoperative Assessment of the Geriatric Surgical Patient
- Colburn, J. L., Mohanty, S. and Burton, J. R. (2017), Surgical Guidelines for Perioperative Management of Older Adults: What Geriatricians Need to Know. *J Am Geriatr Soc*, 65: 1339–1346. doi:10.1111/jgs.14877
- American Geriatrics Society Abstracted Clinical Practice Guideline for Postoperative Delirium in Older Adults, *J Am Geriatr Soc* 63:142–150, 2015
