Issues in Geriatrics for Primary Care Physicians

Catherine R Lucey MD
Vice Dean for Education, School of Medicine
Professor of Medicine
The Faustino and Martha Molina Bernadett Presidential Chair in Medical Education

Agenda for Today

- Use tools to evaluate prognosis and prognosis to plan care
- Discuss an evidence based approach to driving in the elderly
- Contrast management of common chronic diseases in the elderly
- Review issues of feeding and behavioral disturbances in patients with dementia
Priorities for Care of the Geriatric Patient

- Optimize Healthy Aging
- Prevent Preventable Illness
- Maintain Function as long as possible
- Preserve Dignity despite disease related disabilities
- Align Care Decisions with Personal Goals and Values and with Functional Status/Prognosis

Understanding Heterogeneity in Geriatric Patients

- **HEALTHY**
  - Life Expectancy > 10 yrs
  - Independent

- **MEDICALLY VULNERABLE**
  - Life Expectancy: 5-10 yrs
  - Assisted in Living

- **FRAIL**
  - Life Expectancy < 1-2 yrs
  - Totally Dependent
Mrs. A is establishing care

- 79 yo woman presents to establish care since moving to this area to live with her son and his wife. PMHx is notable for COPD, with two hospitalizations in the past year. She has difficulty walking more than a block because of dyspnea. She lives with her son’s family who help with IADLs but she is independent in ADLs. She has a previous 50 pack year history of cigarette use but she hasn’t smoked in 10 years.

- Which of the following cancer screening strategies are appropriate in this patient?
  1. Breast, colorectal and lung cancer screening
  2. Breast and colon cancer screening alone
  3. Lung Cancer screening alone
  4. Other
Multiple Domains Independently Impact Prognosis

- Functional Status
- Comorbid Medical Conditions
- Cognition
- Nutrition
- Polypharmacy
- Psychological Status
- Social Support
- Geriatric Syndromes

Prognosis Impacts a Wide Variety of Decisions with Differing Consequences

Table 1. Sample Clinical Decisions Influenced by Life Expectancy

<table>
<thead>
<tr>
<th>Life Expectancy</th>
<th>Sample Clinical Decision</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term (&lt;2 y)</td>
<td>Discontinuation of statins$^{1,5}$</td>
<td>None</td>
</tr>
<tr>
<td>&lt;5 mo</td>
<td>Referral to hospice</td>
<td>Medicare regulations</td>
</tr>
<tr>
<td>&lt;1 y</td>
<td>Nonoperative management of asymptomatic abdominal aortic aneurysm</td>
<td>None</td>
</tr>
<tr>
<td>Mid-term (2-3 y)</td>
<td>Blood pressure/tidip control in diabetes mellitus unlikely to prevent macrovascular complications</td>
<td>California Healthcare Foundation and AGS$^1$</td>
</tr>
<tr>
<td>&lt;2-3 y</td>
<td>Lowering blood pressure to &lt;140/80 mm Hg unlikely to improve cardiovascular outcomes$^{1,2,7}$</td>
<td>None</td>
</tr>
<tr>
<td>Long-term (&gt;3 y)</td>
<td>Discontinuation of colon cancer screening$^{1,4}$</td>
<td>AGS$^1$ or USPSTF$^3$</td>
</tr>
<tr>
<td>&lt;5 y or “limited”</td>
<td>Discontinuation of breast cancer screening$^{1,3}$</td>
<td>AGS$^{1,5}$ or USPSTF$^2$</td>
</tr>
<tr>
<td>&lt;5 y</td>
<td>Stented bioprosthetic heart valve may be preferable to metallic valve$^{10}$</td>
<td>None</td>
</tr>
<tr>
<td>&lt;5 y</td>
<td>Limited benefit to lowering hemoglobin A$_1$c, therapeutic target to &lt;8%$^7$</td>
<td>California Healthcare Foundation and AGS$^1$</td>
</tr>
<tr>
<td>&lt;8 y</td>
<td>Tight glycemic control in diabetes mellitus unlikely to prevent microvascular complications$^{17,20}$</td>
<td>California Healthcare Foundation and AGS$^1$</td>
</tr>
<tr>
<td>&lt;10 y</td>
<td>Discontinuation of prostate cancer screening$^{18}$</td>
<td>AGS$^1$ and ALA$^2$</td>
</tr>
<tr>
<td>&lt;15 y</td>
<td>Irradiation therapy to ipsilateral breast may not have mortality benefit if life expectancy &lt;15 y for patients with T1, T2 ER+ breast cancer status after breast-conserving surgery and hormonal therapy$^{18,19}$</td>
<td>None</td>
</tr>
</tbody>
</table>

Abbreviations: AGS, American Geriatrics Society; AGS, American Geriatrics Society; ALA, American Urological Association; ER+, estrogen receptor positive; USPSTF, US Preventive Services Task Force.

Prognosis is only one of many important factors to consider for these clinical decisions.
E Prognosis Calculators
eprognosis.ucsf.edu

Mortality Risk Predictor based on Site of Care and other critical elements

Community Dwelling adults similar to Mrs. A
- 10 year mortality risk of 76%.
- 5 year mortality risk is 43%
Cancer Screening may be inadvisable for this patient

Key Issues
- COPD
- Limited Mobility
- Hospitalizations
- IADL dependence

Low Dose CT for Lung Cancer Screening Guidelines

- Recommendations: Annually for those at risk:
  - Adults 55-80
  - > 30 pack year cigarettes
  - Current Smoker or quit within the past 15 years
- HOWEVER, if life expectancy < 10 years, may not benefit from screen or treatment.
Preventive Strategies for patients with a 5-<10 year expected life?

- No Cancer Screening is currently recommended
- Immunizations:
  - Flu Annually; Pneumovax, Zoster if not previously given; Tetanus q 10 years
- Metabolic/Disease Screens:
  - Hypertension: Annually
  - DEXA: if not done or if moderate disease noted.
  - SCREENING Glucose, Cholesterol NOT RECOMMENDED (SOE C)
  - Consider TSH every 2-5 years (SOE C)

Chemoprophylaxis for Elderly

- Vit D 800 IU daily (SOE – A) along with 1200 mg/day of nutritional calcium
  - Lesser doses increase renal stone and don’t decrease fx risk
- Aspirin when benefit of stroke prevention (women) or MI (men) outweighs risk of GI bleed
- Multivitamins are not recommended
Geriatric Health Screens indicated in patients with life expectancy 5-10 years

- Geriatric Syndrome Review
  - Exercise
  - Alcohol Misuse Screen

*REQUIRED ELEMENT OF MEDICARE FIRST OR SUBSEQUENT VISIT.*

Quick Screen for High Priority Issues

1. **IADL**: Who pays your bills?
2. **Driving**: How did you get here today?
3. **Depression**: Do you often feel sad or depressed?
4. **Alcohol**: In the past year, how often have you had more than 4 drinks on 1 occasion?
5. **Cognition**: Mini Cog: Clock drawing, 3 item recall
6. **Falls**: Timed Up and Go or Functional Reach Test
Driving in the Elderly

- More Accidents/Mile; low speed accidents, left turn accidents
- Effective Driving Requires:
  - MS: Strength, Endurance and ROM
  - Visual Acuity, Proprioception and Coordination
  - Cognition: Memory, V/S, Insight, Executive Fxn
- Vision and Physical Disability can be accommodated
- No single exam can insure safe driving ability but many can suggest the need for further evaluation

Clinical Assessment of Driving Related Skills (CADReS)*

- Rapid Pace Walk (10 ft back and forth) >/ 10 seconds
- MoCA < 18 indicated driving risk; 18-24 warrants investigation
- Snellgrove Maze Test: abn is > 61 sec or < 60 with errors
- Trail Making Test Part B: abn is > 180 seconds
- Clock Drawing: Scored for spacing, clock hands and extraneous marks

Clinician’s Guide to Assessing and Counseling Older Drivers. AGS and NHSTA
NOW WHAT? AAA Foundation for Traffic Safety

- Can I report?
  - California, Oregon: YES to all
- Must I report?
  - Hawaii, Washington,
  - Manitoba: Yes to Can, No to Must, No legal protection
- Do I have legal protection?
- Is it confidential?
  - Nevada: YES to MUST but NO to legal protection
Mr. S has Atrial Fibrillation

- 78 yo man released from hospital following a syncopal fall related to new onset atrial fibrillation with rapid ventricular rate. HR was controlled with the use of beta blockers and warfarin and aspirin were started. Patient’s daughter asks that you revisit the question of anticoagulation because of Mr. S’s tendency to fall.

- PMHx: hypertension, copd, diabetes mellitus with CKD, peripheral vascular disease, gait disorder related to neuropathy, otherwise negative.

- Which of the following therapies would you endorse?
  1. Continue warfarin (INR goal 2-3) and aspirin (75 mg)
  2. Continue warfarin (INR goal 2-3) and stop aspirin
  3. Use Aspirin Alone
  4. Continue Warfarin to INR goal 1.5-2.0

Anticoagulation & the risk of Intracranial Hemorrhage (ICH) in the Elderly

- Supra-therapeutic anticoagulation is bad.
  - INR > 3.0 substantially increases risk of ICH in patients with prior CVA; > 3.5 increases risk in all

- Subtherapeutic anticoagulation with warfarin is NOT safer

- Reserve aspirin plus warfarin for those with the highest thrombotic risk

- Uncontrolled hypertension (> 160/90) is a relative contraindication to anticoagulation;
Risk of Fall and Advisability of Anticoagulation

- Clinicians consistently overestimate the risk of falls and fall related intracranial hemorrhage.
- A patient with a moderate risk of stroke would need to fall 300 x/yr for risk to outweigh benefits.
- Conclusion: in patients with a moderate risk of stroke from nonvalvular AF, the risk of falling should not impact decisions about anticoagulation for stroke prevention.


Newer TSOACs* May Improve Risk/Benefit Ratio even further

- TSOAC all demonstrate lower risk of ICH than warfarin, with noninferior prevention of stroke
  - Dabigatran/Pradaxa: RE-LY [NEJM. 2009;361(12)]
  - Abixaban/Eliquis: ARISTOTLE [NEJM. 2011; 365(11)]
  - Rivaroxaban/Xarelto: ROCKET-AF [NEJM. 2011:365(10)]
- Dabigatran and Rivaroxaban may increase risk of GI Bleed; Dabigatran may increase risk of MI.
- Renal disease may limit use.

* TSOAC: target specific oral anticoagulant
Hypertension in the Elderly: Why Treat?

- Isolated Systolic Hypertension (ISH) accounts for the majority of Hypertension in the Elderly
- SBP & PP correlate with CV outcomes
- In patients >60 with ISH, the NNT for 5 years to prevent one CV event is 26! For pts > 70 NNT = 19
- Treatment in pts > 80 significantly reduces the risk of fatal stroke and trends toward reduction in all stroke
  - HYVET Beckett NS et al. NEJM. 2008; 358: 1887

Hypertension in the Elderly: How Low to Go?

- HYVET (treatment of hypertension in the very old): target 150/80 decreased risk of fatal stroke.
  - HYVET Beckett NS et al. NEJM. 2008; 358: 1887
- JNC 8: < 150/90 unless DM/CKD then < 140/90
  - James PA et al. JAMA 2014; 311:507
- Treatment Limiting Issues:
  - DBP < 60 in all and < 65 in those with CV disease is associated with increased CV risk
  - Orthostatic hypotension may limit ability to achieve optimal target.
SPRINT and the Elderly

### Hypertension in Frail Elders

- Benefits of antihypertensive therapy are less and may be nonexistent.
- Nursing home residents with BP< 130 on two or more agents had HIGHER mortality
  
  - Benetos A et al. JAMA Int Med. 2015; 175:989

- In patients unable to walk 6 meters in less than 8 seconds, a higher blood pressure was associated with lower mortality.
  
Chronic Kidney Disease in the Elderly

- CKD in the elderly is different from CKD in Younger Patients
  - For patients > 75, the progression from CKD 4/5 to ESRD slows, in particular in the absence of proteinuria.
  - For pts > 85, the risk of death exceeds the risk of ESRD
- Options
  - Initiation of Dialysis
  - Renal Transplantation
  - Nonaggressive Renal Care/Palliation

Natural History of Elderly Patients on Dialysis

- Independent Living Elderly
  - Dialysis associated with functional decline, frailty, falls and increased time in health care environments in contrast to home.
  - Life expectancy for those who chose dialysis against MD recommendations: 8.3 vs. 6.3 months.
- Nursing Home Population on Dialysis
  - Mortality in year 1 after dialysis initiative: 58%; only 13% maintain quality of life
- Highest Risk for complications or lack of survival benefit
  - Preexisting functional impairment, cognitive dysfunction, ischemic cardiovascular disease and multiple comorbidities and age > 80
Transplantation in the Elderly

- Older renal recipients:
  - Lower acute and chronic rejection
  - Higher rates of infection and sepsis
- UNOS scoring for deceased donor transplantation
  - Depends on life expectancy of patient and the graft life expectancy; Older adults no longer have access to grafts with long life expectancy
  - Time on Transplant list can exceed 5 years.
- Pre-emptive Living Related Donation may be best bet.

Non Aggressive Renal Care

- Life expectancy with nonaggressive renal care can exceed 2 years.
- However, withdrawal from Dialysis: Death usually ensues within 7-14 days
- Less than half who withdraw use hospice
- Failure to use hospice is associated with much greater likelihood (69% vs 22%) of dying in the hospital.
Issues in the Care of Patients with Dementia

Role of the Primary Care Physician

- Educate family and caregivers about natural history of dementia, at a time when they are able to hear and understand.
- Help them identify a strategy for supporting their loved one and demonstrating care and compassion.
- Guide them to wise therapeutic decisions on behalf of the patient with dementia.
Recognize when the end is near

- 50% mortality at 6 months in patients with:
  - Bedbound Status
  - Feeding Difficulties
  - Febrile Episodes

Ms T won’t eat

- Ms T has advanced dementia and has been living in a nursing home for 3 years. The nursing home has described progressive difficulties in getting Ms. T to eat over the past three months. She is losing weight and they have urged her daughter to have the physician insert a PEG tube to make her more comfortable.

- In patients with advanced dementia, feeding tubes:
  1. prevent aspiration and aspiration pneumonia
  2. increase the risk of pressure ulcers
  3. improve quality of life for patients with dementia
  4. improve survival in patients with dementia
In Advanced Dementia, Tube Feeding is Not Recommended

- Tube feeding, in comparison to hand feeding:
  - Does not increase survival or improve function
  - Does not prevent aspiration or improve nutrition
  - Increases the risk of new and does not heal existing pressure ulcers.
  - Is associated with increased agitation and use of restraints
- Patients with feeding issues who are not tube fed do not show increased distress

Feeding Tubes in Advanced Dementia

- 34% of nursing home residents have a feeding tube
- More than 2/3s are placed during a hospitalization
- Meaningful conversations about feeding tubes with caregivers are uncommon.
Managing Feeding Difficulties

- Anticipate the development as a consequence of progressive neurologic debilitation.
- Discuss options early in the course of the disease.
- Search for reversible causes if disconnect between mental status and feeding issues.
  - Constipation, Xerostomia, Medication side effects (including Cholinesterase inhibitors...)
- Liberalize dietary restrictions.
- Mealtime as an event, family and caregiver support.

Managing Behavioral Difficulties in Dementia

- Behavioral disturbances are universal in patients with dementia.
- These disturbances range from depression, apathy, and irritability to delusions, hallucinations, manias and aggressive agitation.
- Acute onset behavioral issues should prompt:
  - Evaluation for acute medical condition
  - New drug toxicity/interaction
  - Change in environment/caregivers
- First line therapy for chronic behavioral disturbances should include non pharmacologic treatments (music, exercise, patient choice).
Pharmacology of Behavioral Issues in Dementia

- Anticholinesterase inhibitors and memantine may delay the onset of behavioral issues: they do not treat them.
- Antidepressants (particularly SSRI) may be useful for patients with depressed mood as a major feature.
- All antipsychotics carry black box warnings for mortality in patients with dementia, but are sometimes necessary.
- Second generation antipsychotics have fewer extrapyramidal effects.

Take Home Messages

- DO LESS:
  - Cancer Screening in Medically Vulnerable or Frail Patients
  - Dialysis in ESRD in patients with limited life expectancy
- DO MORE:
  - Driving Screens
  - Anticoagulation for Primary Stroke Prevention in MVE
  - Hypertension Control in the MVE
- ANTICIPATE AND AVOID HARM IN MANAGING
  - Feeding and Behavioral Issues in Advanced Dementia
Fall Evaluation and Prevention

- Leading Cause of Injury in Adults > 65
- 30-40% of Community Dwelling Adults fall annually; 50% of those > 80
- Falls lead to injury, injury leads to disability; Falls also lead to social isolation and restricted activity,
- AGS recommends
  - Falls and Gait Questions Annually for All
  - Multifactorial Risk assessment for those with 2 falls in the past year or 1 fall with gait/documented mobility problem
The Timed Up and Go (TUG) Test

**Purpose:** To assess mobility

**Equipment:** A stopwatch

**Directions:** Patients wear their regular footwear and can use a walking aid if needed. Begin by having the patient sit back in a standard arm chair and identify a line 3 meters or 10 feet away on the floor.

**Instructions to the patient:**
When I say “Go,” I want you to:
1. Stand up from the chair
2. Walk to the line on the floor at your normal pace
3. Turn
4. Walk back to the chair at your normal pace
5. Sit down again

On the word “Go” begin timing.
Stop timing after patient has sat back down and record.

**Time:** _________ seconds

*An older adult who takes ≥12 seconds to complete the TUG is at high risk for falling.*

---

Functional Reach Test:

< 6 Inch Reach Associated w/Risk of Fall

[Video Link](https://www.youtube.com/watch?v=_alqJzt-U2s)
**Evidence Based Fall Prevention in the Elderly**

- Prescribe Multimodality Exercise (Strength, Balance, Gait Training)
- Prescribe Vit D (800IU/day to 25 OH Vit D >30) to Vit D deficient patients;
- Refer patients with pain for podiatric evaluation
- Minimize Psychotropic Medications
- Modify Home Environment
- Eliminate Polypharmacy
- Treat orthostatic Hypotension


**Atrial Fibrillation in the Elderly**

- Rate Control favored over efforts to restore rhythm for patients who are mildly symptomatic or asymptomatic
- AV nodal blocking agents with Beta Blockers and Diltiazem preferred as first line agents
- Rate Control Efficacy Trial (RACE-II) found noninferiority of lenient rate control (<110 bts/min resting HR) with strict control (< 80 bts/min resting HR.)
  - January CT et al. J Am Coll Cardiol. 2014; 64(21): e1
Risk Tools

- **CHA2 DS2 VASc**
  - 1 point for hypertension, female sex, congestive heart failure, evidence of vascular disease, age between 65-74.
  - 2 points if age > 75, prior stroke/tia/thromboembolism
  - Score=0, no anticoagulation; Score = 1 antiplt or oral anticoag, Score => 2 oral anticoag


- **HAS BLED**
  - Points for hypertension, renal disease, liver disease, stroke, age > 65, labile INR, prior major bleeding, alcohol > 8 drinks/week, other drugs that increase bleeding.
  - Score >/3= 4% or more risk of bleeding