Patient-centered Care and Multimorbidity

Journal Club
Christina Rincón, MD
December 6, 2012
Learning Objectives

- Review of terminology
- Understand the implications of multimorbidity
- Review recent care management principles developed by an AGS expert panel
- Apply principles to specific patient cases
Terminology

- Comorbidity: a condition or conditions that coexist in the context of an index disease
- Eg. An oncologist may take into consideration some co-occuring conditions when treating lung cancer

Terminology

- Multimorbidity: co-occurrence of two or more medical or psychiatric conditions that may or may not interact with each other within the same individual.
- Eg. Heart disease, diabetes, COPD, arthritis, CVA, CKD, depression, dyspepsia, migraines, falls, sarcopenia, etc.
- Key point: one is not necessarily more central than another.

Multimorbidity

Multimorbidity: Clinical Implications

- More than 50% of older adults have 3+ chronic diseases
- Having multiple chronic diseases has distinctive cumulative effects and can affect:
  - Quality of life
  - Ability to work and employability
  - Disability and Functional capacity
  - Frailty
  - Nursing home placement
  - Treatment complications
  - Avoidable admissions
  - Mortality
- Has implications for social, educational, cultural, behavioral, economic, and environmental domains which can in turn affect management
Multimorbidity: clinical implications

- Most Clinical Practice Guidelines (CPGs) focus on the management of a single disease
- Trials and observational studies from which CPGs are developed do not necessarily include or may under-represent older adults with multimorbidity
- Thus CPGs may be impractical, irrelevant, or even harmful for older adults
What to do?

- Older adults need *clinical management* which gives full spectrum care for chronic conditions.
- This includes pharmacological and non-pharmacological treatment and interventions, screening, prevention, diagnostic tests, follow-up, and advanced illness care.
- Care is individualistic but still takes into account available evidence.
Guiding Principles of the Care of Older Adults with Multimorbidity: An Approach for Clinicians
American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity

Summary Article:
Patient-Centered Care for Older Adults with Multiple Chronic Conditions: A Stepwise Approach from the American Geriatrics Society
American Geriatrics Society (AGS) convened a panel with expertise in older adults with multimorbidity.

The goal was to develop a document with a clinical approach to the care of older people with multimorbidity.

The goal of this consensus document is also to facilitate the development of an evidence base by which clinicians can make sound care decisions for this population.
Methods: Population of Interest

- Focuses on older people with life expectancies of months to many years
- Excludes costs of care, acute care, transitions of care, and imminently dying
Methods: Panel & Review

- Interdisciplinary Panel
  - AGS Clinical Practice and Models of Care Committee convened an expert panel with funding from the AGS
  - Conflicts of interest were disclosed and clarified
  - Through a one day in-person meeting and a series of conference calls, five domains relevant to older person care were developed
Methods: Panel & Review

- **Literature Review**
  - Structured PubMed literature search with development of MeSH headings
  - Panel reviewed the full text articles

- **Relevant Article Review**
  - Panel members also identified articles that were determined to be highly relevant to each domain

- **External Review**
  - The resultant document was circulated for peer review among organizations with interest and expertise in multimorbidity
  - Document was posted to the AGS website for public comment
Brief Algorithm

Inquire about the patient’s primary concern (and that of family and/or friends, if applicable) and any additional objectives for visit.

Conduct a complete review of care plan for person with multimorbidity.

OR

Focus on specific aspect of care for person with multimorbidity.

What are the current medical conditions and interventions? Is there adherence/comfort with treatment plan?
Consider patient preferences.

Is relevant evidence available regarding important outcomes?

Consider prognosis

Consider interactions within and among treatment plans.

Weigh benefits and harms of components of the treatment plan.

Communicate and decide for or against implementation or continuation of intervention/treatment.

Reassess at selected intervals: for benefit, feasibility, adherence, alignment with preferences.
Domain I. Patient Preferences

- Guiding Principle: to elicit and incorporate patient preferences into medical decision-making for older adults with multimorbidity
- Recognize when the patient is facing a “preference sensitive” decision
  - Treatment may improve one condition but may make another worse
  - Therapy may have long term benefits but may have short term adverse effects
  - Additional medications each with benefits and harms that may interact and contribute to polypharmacy
- Ensure that patients are adequately informed about the expected benefits and harms of treatment options
Domain I. Patient Preferences

- Elicit patient preferences only after the individual is sufficiently informed.
- For individuals with cognitive impairments, involve surrogate decision-makers.
- Preferences may change over time and should be re-examined particularly with change in health status.
- Does not mean the patient has the right to demand any available treatment without a reasonable expectation of some benefit.
Domain II. Interpreting the Evidence

- Guiding principle: Recognize the limitations of the evidence base and interpret and apply the medical literature specifically to older adults with multimorbidity.
- Ascertain whether people with multimorbidity or older people were included in sufficient numbers in the study.
- Do not ignore observational studies which often include older adults with multimorbidity and important data about adverse events.
- Assess whether the outcomes reported are meaningful for the individual concerned.
Domain II. Interpreting the Evidence

- Assess whether there is meaningful variation in baseline risk for outcomes that the treatment or intervention is designed to affect
- Identify whether the risks and side effects of the interventions in older patients with multimorbidity are clearly known
- Assess whether the evidence takes into consideration financial costs, treatment complexity, burden, and their possible affects on adherence
Domain II. Interpreting the Evidence

- Is it known how long it takes to accrue the benefit or harms of the treatment or intervention?
- Determine the precision and confidence limits of the findings
- Does the document give absolute risk reductions or merely relative risk reductions?
Domain III. Prognosis

- Guiding Principle: Frame clinical management decisions within the context of risks, burdens, benefits, and prognosis.

- The time horizon to benefit for a treatment may be longer than the individual’s projected life span, raising the risk of polypharmacy and interactions.

- Use published prognostic tools for assistance where applicable: Vulnerable Elders Survey (VES-13) and Palliative Prognostic Score (PaP)
# Prognostic Index to Predict 4-year Mortality Risk in Community-dwelling Older Adults

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Points</th>
<th>Characteristic</th>
<th>Points</th>
<th>Characteristic</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 60 to 64</td>
<td>1</td>
<td>Cancer</td>
<td>2</td>
<td>Walking several blocks</td>
<td>2</td>
</tr>
<tr>
<td>Age 65 to 69</td>
<td>2</td>
<td>Chronic Lung Disease</td>
<td>2</td>
<td>Pulling or pushing large objects</td>
<td>1</td>
</tr>
<tr>
<td>Age 70 to 74</td>
<td>3</td>
<td>Heart Failure</td>
<td>2</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Age 75 to 79</td>
<td>4</td>
<td>BMI &lt; 25</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 80 to 84</td>
<td>5</td>
<td>Current Smoker</td>
<td>2</td>
<td>0 to 5</td>
<td>&lt;4%</td>
</tr>
<tr>
<td>Age ≥ 85</td>
<td>7</td>
<td>Functional difficulties caused by health or memory</td>
<td>2</td>
<td>6 to 9</td>
<td>15%</td>
</tr>
<tr>
<td>Male sex</td>
<td>2</td>
<td>Bathing</td>
<td>2</td>
<td>10 to 13</td>
<td>42%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
<td>Managing finances</td>
<td>2</td>
<td>≥14</td>
<td>64%</td>
</tr>
</tbody>
</table>

## Point Total

- **Point Total**: Sum of all points assigned to characteristics.
- **4-year Mortality Risk**:
  - 0 to 5: <4%
  - 6 to 9: 15%
  - 10 to 13: 42%
  - ≥14: 64%
Domain IV. Clinical Feasibility

- Guiding Principle: Consider treatment complexity and feasibility when making clinical management decisions
- An interdisciplinary team should assess adherence on an ongoing basis
  - Medication Management Ability Assessment (MMAA)
  - Drug Regimen Unassisted Grading Scale (DRUGS)
  - Hopkins Medication Schedule (HMS)
  - Medication Management Instrument for Deficiencies in the Elderly (MedMaIDE)
Domain IV. Clinical Feasibility

- Use care transitions to reevaluate treatment complexity and adherence
- Use education programs that teach self-management skills and improve self-efficacy for meeting realistic goals in order to also improve adherence
Guiding Principle: Use strategies for choosing therapies that optimize benefit, minimize harm, and enhance quality of life

Identify treatments, procedures, and nonpharmacological therapies that may be inappropriate

Use care transitions to reevaluate medication appropriateness

If adding medications, go over risks, benefits, harms, burdens
Domain V. Optimizing Therapies and Care Plan

- Have a safe discontinuation plan when stopping medications
- Partner with pharmacists and other clinicians to optimize medication management
Strengths

- Reminder to clinicians that clinical decision making should involve patients and those who help them make decisions
- Reminder to clinicians that multimorbidities create complex backdrops to these clinical decisions and must be taken into account
- Reminder that outcomes include quality of life, being pain free, being functional in a community, etc. and not just reducing the burden of disease
- Recognizes the cultural shift towards providing Patient-centered Medical Homes
Challenges

- Dynamic health status of older patients with multimorbidity
- Satisfactory evidence for clinical management of multimorbid individuals is scarce
- Treatments to improve one outcome may worsen another
- Time consuming
- Unsupportive reimbursement structure
- May not have access to interdisciplinary team
- Fear of liability regarding underuse of therapies
Patient Case Application

- A 72 year old woman presents for routine follow-up visit with her daughter. She lives alone in senior housing and has home health aides and friends to help with IADLs. She can manage her ADLs independently. She lives on a small, fixed income. She is physically frail, has difficulty walking, uses a walker to get around, and has a history of frequent falls. The patient is concerned about osteoporosis, whether it is relevant to her and if anything should be done about it. Her daughter is concerned about mother’s “slipping” in general capabilities.
What are her Current Medical Conditions?

- Moderate to Severe COPD: FEV1/FVC 60%
- Smoking habit
- Hx of TIAs and lacunar infarcts
- PVD, carotid stenosis, R subclavian steal syndrome
- Hiatal hernia
- Hx of MDD and suicide attempt
- Mild cognitive impairment: MMSE 22/30
- Hyperlipidemia
What are the current therapies and/or interventions?

- Albuterol/ipratropium inhaler 1-2 puffs q6h
- Escitalopram 20mg daily
- Esomeprazole 40mg daily
- Clopidogrel 75mg daily
- Simvastatin 10mg at bedtime
- Multivitamin with calcium twice daily
Is she comfortable (and adherent to) the clinical management plan?

- Has trouble keeping appointments
- Some trouble taking medications (forgets, doesn’t fill mediset correctly, refill pattern off)
- Complains of having to take too many medications
What are her preferences?

- Prefers to stay in her apartment and live independently
- Daughter agrees but feels the patient needs greater oversight, which the daughter cannot provide
What is the Evidence?

- FRAX scores: 12% for major osteoporotic fracture and 4% for hip fracture within 10 years
- Dexa can detect bone loss and osteoporosis and is covered by Medicare
- Bisphosphonates: in osteoporosis can improve BMD and prevent all major osteoporotic fractures and have been shown to reduce the incidence of spine and hip fractures by 50% over 3 years
Evidence continued

- If her baseline risk of major osteoporotic fracture is 12% over 10 years and the assumption is made that risk is constant, then 3 year risk is 3%. With bisphosphonates, her ARR would be 1.5% over 3 years.

- If she already has subclinical vertebral fractures, her ARR with treatment would be even greater with benefits beginning after 9-12 months of treatment.
Evidence Continued

- Adverse events: bisphosphonates could aggravate her hiatal hernia and increase her risks of atypical fractures and osteonecrosis
- Likely will have difficulty keeping to the stringent instructions given her past difficulty with adherence
- Alternatives: calcium 1200mg/d and vitamin D 1000 IU/day, weight-bearing exercise, fall prevention strategies
What is the prognosis?

- 64% risk of dying within 4 years according to 4-year mortality prognostic index.
Are there Interactions with Medications or Conditions?

- Clopidogrel + escitalopram = increased risk of bleeding
- Esomeprazole + clopidogrel = increased risk of thrombosis
- Esomeprazole + calcium = decreased calcium absorption and increased fracture risk
- Escitalopram can increase serotonin and result in less osteoblast activity and double fracture risk
Does the balance of benefits and harms favor the intervention?

- Ability to reliably take and tolerate weekly or monthly bisphosphonate is low
- Yearly IV bisphosphonates is easier to adhere to, but too costly
Communicate and discuss decisions with Individual and Family

- Hip fracture may threaten or terminate this woman’s independence
- But ARR is small
- Bisphosphonates could aggravate hernia
- May not be able to follow strict prescription
- Incremental benefits of bisphosphonates were not considered to be worth the possible harms
- There are alternatives
Communicate and Decide

- Because the patient decided not to begin bisphosphonates, her BMD was not tested
- Pt chose to continue and optimize oral calcium and vitamin D
- Pt chose to undertake a daily walk
References