Managing Multiple Chronic Conditions (MCC): Challenges in the Care of Older Adults

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Learning Objectives

Upon completion of this module, learners will be able to:

1. Discuss the terminology, epidemiology, and impact of MCC
2. Describe the patient care management challenges of MCC
3. Discuss the guiding principles of MCC
4. Describe the approach to care of the older adult with MCC
5. Identify resources to support the care management of MCC

Need for a MCC Approach

- “The tremendous efforts in the fight against chronic disease have inadvertently created individual disease ‘silos,’ which are reinforced by specialty organizations, advocacy groups, disease management organizations, and government at all levels. Transformation from a single chronic condition approach to a multiple chronic conditions approach is needed. Only then will the United States be better prepared to care for this increasingly large population”

(Parekh & Barton, 2010)

Disease Silos: Single Disease Paradigm
Expert Interview, Heather E. Whitson, MD, MHS

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Case Study

Case: Managing Multiple Chronic Conditions in Older Adults

- Mrs. Roberts is a 77-year-old widow who lives alone
- She has multiple medical problems, which include: hypertension (HTN), diabetes (DM), multiple falls at home, osteoporosis, osteoarthritis, anxiety, insomnia, allergic rhinitis, glaucoma, chronic obstructive pulmonary disease (COPD), currently smokes four cigarettes a day, coronary artery disease (CAD), cerebral vascular accident (CVA), and gastroesophageal reflux disease (GERD)

Case: Managing Multiple Chronic Conditions in Older Adults

- Mrs. Roberts is currently taking 21 medications, which include:
  - Budesonide/formoterol, albuterol, amlodipine, insulin glargine, insulin aspart, sitagliptin, alendronate, acetaminophen, diclofenac gel, glucosamine, meclizine, omeprazole, mirtazapine, zolpidem, trazodone, diphenhydramine, fluticasone, estrogen vaginal cream, triamcinolone cream, and timolol eye drops
- Mrs. Roberts sees four different doctors on a regular basis
  - Primary care, cardiologist, pulmonologist, and a pain specialist

Case: Managing Multiple Chronic Conditions in Older Adults

- Though Mrs. Roberts tries to keep all her prescriptions and medical appointments organized, she finds it increasingly difficult to manage, given the increasing complexity

Case: Managing Multiple Chronic Conditions in Older Adults

Practice Considerations:

- As a health care professional, it is important to recognize the challenges for patients living with MCC
- What concerns would you have regarding Mrs. Roberts' high illness, treatment, and cost burden?
- What care management strategies might you consider to address these problems?
- How might you incorporate other health care team members into Mrs. Roberts' care?

Terminology, Epidemiology, and Impact of MCC in Older Adults

Multiple Chronic Conditions: Epidemiology

- MCC are “at least two or more chronic conditions that collectively have an adverse effect on health status, function, or quality of life and that require complex health care management, decision-making, and care coordination” (U.S. Department of Health and Human Services, 2010)
- Approximately 25% of US adults have diagnoses of MCC (Ward et al., 2014)
- 35.3% of Americans aged 65 to 79 years have multimorbidity
- Prevalence increases with advancing age, affecting 70% of adults over 80 years of age (Ward et al., 2014)
- Coexisting mental health conditions add to care management complexity (Lehnert et al., 2011)

Multiple Chronic Conditions: Impact

- Adults living in the East North Central and East South Central regions have higher rates of multiple chronic conditions than the national average
- MCC is associated with staggering health care utilization and costs

(Thorpe et al., 2010; Wolff et al., 2002)

- Individuals with MCC are at heightened risk for significant adverse health outcomes, often beyond the effects of the individual conditions:

(Komisar & Feder, 2011; Vogeli et al., 2007)

- Treatment complications
- Hospitalization
- Nursing home placement
- Death
- Functional limitations
- Frailty
- Diminished quality of life
- Avoidable inpatient admissions

Looking at Mrs. Roberts

Mrs. Roberts:

- Has multiple chronic conditions
- She has a complex treatment regimen requiring multiple medications
- She has multiple doctors overseeing her care requiring multiple appointments
- She has documented functional limitations, including a history of falls

Multiple Chronic Conditions: Practice Implications

Practice Implications:

- Identification and care management of MCC presents challenges to patients and health care providers because of the increasing cost, care coordination, and complexity of health care needs

Assessment Question 1

From the description below, please identify the patient(s) with multiple chronic conditions? (Select all that apply)

a) 81-year-old with hypertension, anemia, diabetes, and a stroke

b) 79-year-old widow with arthritis who lives alone without assistance

c) 75-year-old active tennis player with arthritis

d) 87-year-old grandmother with chronic lung disease

e) 68-year-old with diabetes, recent stroke, frequent falls, and a recent hip fracture

Assessment Question 1: Answer

From the description below, please identify the patient(s) with multiple chronic conditions? (Select all that apply)

a) 81-year-old with hypertension, anemia, diabetes, and a stroke (Correct Answer)

b) 79-year-old widow with arthritis who lives alone without assistance

c) 75-year-old active tennis player with arthritis

d) 87-year-old grandmother with chronic lung disease

e) 68-year-old with diabetes, recent stroke, frequent falls, and a recent hip fracture (Correct Answer)

Patient Care Management Challenges: MCC in Older Adults

MCC: Patient Care Management Challenges – Overview

- Difficulty in adherence to multiple clinical practice guidelines
- Competing patient and clinician demands and shifting priorities
- Polypharmacy
- Limited evidence to guide treatment discussions

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012; Boyd et al., 2010; Leroy et al., 2014; Osborn et al., 2015 ; Parekh & Barton, 2010; Thorpe et al., 2010; USDHHS, 2010)

Adherence to Multiple Clinical Care Guidelines

- Most treatment and practice guidelines target a single condition (Boyd et al., 2005; Boyd & Kent, 2014)
- Different guidelines may offer conflicting recommendations (Boyd et al., 2005 ; Fried et al., 2011)
- Guidelines must recognize the need and adapt recommendations for patients with increased complexity (Boyd & Kent, 2014 ; Fabbri et al., 2012)

Competing Demands and Shifting Priorities

- Issues related to competing demands are common (Morris et al., 2011)
- Patients must balance illness burden with treatment burden and quality of life (Boyd et al., 2005 ; Morris et al., 2011)
- Clinicians must prioritize conditions and balance treatment decisions consistent with patient goals, preferences, tolerance, and needs (Ostbye et al., 2005)

Polypharmacy

- Polypharmacy is common
  - Medication use has doubled since 1999
  - Patients with MCC are at greatest risk for being prescribed inappropriate medications
  - 36% are prescribed 5 or more drugs
  - 20% of drug use may be inappropriate
  - 42% of patients fail to inform providers about complementary medicines
  - 40% of over-the-counter drugs are purchased by older adults

(Hajjar et al., 2007 ; Qato et al., 2016)

Polypharmacy

- Polypharmacy poses risks
  - ↑ risk of hospitalization
  - ↑ length of hospital stay
  - ↑ risk of hospital mortality
  - ↑ risk of hospital readmission
  - ↑ drug-drug interactions
  - ↑ risk of falls

(Steinman et al., 2014)

Limited Evidence for MCC

- Complex patients are underrepresented in clinical research populations

  (Leroy et al., 2014 ; Parekh & Barton, 2010;)

- Evidence base to guide medical decision-making is limited

  (Boyd et al., 2005; Fortin et al., 2006; Grembowski et al., 2014)

- Comorbidities typically are an exclusion factor for patient recruitment into studies addressing a given clinical condition
- Investigators often face challenges in terms of recruitment and retention of patients with MCCs that lead to selection bias and large amounts of missing data

Looking at Mrs. Roberts

Mrs. Roberts:

- Has high illness burden with multiple chronic conditions
  - Multiple symptoms and impairments
  - Care driven by single disease treatment goals
  - Likely, no one clinician has a detailed understanding of her care needs
- Has high treatment burden requiring multiple medications and clinicians
  - Multiple appointments
  - Challenges in coordinating care
  - Treatment complexity can be overwhelming

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Patient Care Challenges – Practice Implications

Practice Implications:

- In the care management of MCC, both patients and clinicians need to move beyond the traditional focus of treating one condition and be open to the need for new models of care utilizing holistic, patient-centered, coordinated care strategies involving the entire health care team
- Care management must be coordinated across team members efficiently, while limiting fragmented specialist care

Assessment Question 2

Mrs. Roberts presents to your clinic for her routine follow-up appointment. Which of the following options would be included as part of your overall MCC care plan? (Select all that apply)

a) Medication review

b) Liberal A1C target

c) Encourage enrollment in a fall prevention program

d) Vaccination update

e) Maximize specialist care

Assessment Question 2: Answer

Mrs. Roberts presents to your clinic for her routine follow-up appointment. Which of the following options would be included as part of your overall MCC care plan? (Select all that apply)

a) Medication review (Correct Answer)

b) Liberal A1C target (Correct Answer)

c) Encourage enrollment in a Fall Prevention program (Correct Answer)

d) Vaccination update (Correct Answer)

e) Maximize specialist care

Assessment Question 3

When seeking to overcome the patient care challenges of managing MCC, health care providers should consider which of the following? (Select all that apply)

a) Address all disease conditions equally

b) Reduce polypharmacy

c) Target disease-specific guideline-directed care

d) Reduce treatment burden

e) Improve continuity of care

Assessment Question 3: Answer

When seeking to overcome the patient care challenges of managing MCC, health care providers should consider which of the following? (Select all that apply)

a) Address all disease conditions equally

b) Reduce polypharmacy (Correct Answer)

c) Target disease-specific guideline-directed care

d) Reduce treatment burden (Correct Answer)

e) Improve continuity of care (Correct Answer)

Guiding Principles of MCC in Older Adults

Guiding Principles of MCC Management

1. Elicit and incorporate patient preferences into medical decision-making
2. Recognize limitations of the evidence base in interpreting and applying the medical literature
3. Frame clinical management decisions within the context of risks, burdens, benefits, and prognosis
4. Consider treatment complexity and clinical feasibility when making decisions
5. Choose therapies that optimize benefit, minimize harm, and enhance quality of life for the older adult

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012; Smith et al., 2012)

Guiding Principles: 1. Patient Preferences

- All clinical decisions require an assessment of patient preferences
- Patients must be adequately informed about expected benefits and harms
- Patient decision making styles should be accommodated
- Preferences may change over time and should be reexamined
- All patients should have the opportunity to evaluate choices and prioritize their preferences for care, within personal and cultural contexts in a collaborative care partnership model

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012; Belcher et al., 2006; National Partnership for Women & Families, 2009)

Guiding Principles: 2. Interpreting the Evidence

- Assessing the evidence and applying to an older adult with MCC should include:
  - Applicability and quality of evidence
  - Outcomes relevant to patient goals and preferences
  - Harms and burdens
  - Absolute risk reduction
  - Time horizon to benefit
  - Time horizon to harm

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012)

Guiding Principles: 3. Prognosis

- Prognosis informs, but does not dictate, care management decisions
- Clinicians should offer to discuss prognosis with patients
- It may be helpful to prioritize decisions based on remaining life expectancy
- Tools for estimating life expectancy are available
- See the Module "Transitions in Care: Acute Care and the Older Adult"

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012; eprognosis, n.d.)

Guiding Principles: 4. Clinical Feasibility

- The more complex the treatment regimen, the higher the risk of nonadherence and adverse drug reactions
- Clinicians should assess patient's ability to adhere to the treatment plan or medication regimen
- Clinicians should discuss patient preferences and incorporate this information when developing care management plans
- Goal is to improve quality of life by reducing treatment burden, adverse events and unplanned care

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012)

Guiding Principles: 5. Optimize Therapies and Care Plans

- Clinicians should prioritize treatments and interventions
- Consider identifying interventions, including medications, that should not be started or should be reduced or stopped

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012)

Guiding Principles: 5. Optimize Therapies and Care Plans

- Complex treatment regimens:
  - Increase nonadherence
  - Increase adverse reactions
  - Decrease quality of life
  - Increase economic burden
  - Increase strain and depression

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012)

Guiding Principles: 5. Optimize Therapies and Care Plans

- Factors to consider when identifying interventions that should not be started or should be stopped:
  - Likelihood of benefit, in terms of altering the person's baseline risk for the particular outcome
  - Risk of harm
  - Comparison of the time horizon to benefit, and the patient's projected remaining life expectancy (or prognosis)
  - Clinicians should identify and reduce inappropriate medications

Guiding Principles for the Care of Older Adults with MCC

Inquire about the patient's *primary concern* (and that of family and/or caretaker(s), if applicable) and any additional objectives for visit

⬇

Conduct a *complete review* of care plan for person with MCC

or

Focus on *specific aspect* of care for person with MCC

⬇

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?

(American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity, 2012)

Guiding Principles for the Care of Older Adults with MCC

Consider *prognosis*

⬇

Consider *interactions* within and among treatments and conditions

⬇

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, and alignment with patient's preferences

(American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity, 2012)

Looking at Mrs. Roberts

Mrs. Roberts

- The patient and patient's family (daughter) are worried and feel overwhelmed with her care. Mrs. Roberts could likely benefit from improved MCC care management
- The complexity of care, multiple health care visits, and recent falls has presented challenges
- Recently, she has expressed low mood and is reluctant to go out and socialize

Guiding Principles – Practice Implications

Practice Implications:

- The overall goal is to improve the primary care of community-dwelling older patients who have MCC; in most cases, this will require a redesign of how care is coordinated and enhanced continuity of care
- Care management will involve interprofessional teams of health care providers centered on patient preferences and goals, as well as improving quality of life by reducing treatment burden, adverse effects, and unnecessary care

Assessment Question 4

Which one of the following is most likely to improve Mrs. Roberts' quality of life?

a) Add tiotropium inhaler

b) Refer to a psychiatrist

c) Refer to a dietician for a diabetic diet

d) Identify and treat depression

e) Increase trazodone dose

Assessment Question 4

Which one of the following is most likely to improve Mrs. Roberts' quality of life?

a) Add tiotropium inhaler

b) Refer to a psychiatrist

c) Refer to a dietician for a diabetic diet

d) Identify and treat depression (Correct answer)

e) Increase trazodone dose

Approach to Care:
MCC in Older Adults

Approach to Care Management of MCC

When providing care for an older adult with MCC, the health care team should provide:

1. Holistic, patient-centered care
2. High illness and treatment burden assessment
3. Continuity and coordination of care

Approach to Care: Patient-Centered

- Focus on patient's individual needs, preferences for treatments, health care priorities, mental acuity, lifestyle, and goals
- Incorporate the above into medical decision-making
- Address how patient's health conditions and treatments interact and how it affects quality of life and overall function

(Berwick, 2002; National Partnership for Women & Families, 2009; Reuben, 2009; Stewart et al., 2000)

Approach to Care: Patient-Centered

EXAMPLES of how clinicians can elicit patient care goals and priorities in older adults with MCC:

- Ask about all the medical conditions together (holistic, patient-centered care)
- Ask what the older adult wants and expects from treatment
- Attempt to cut down on the number of different health appointments and number of medications
- Provide everyone involved in the care of the older adult easy access to care plans

Approach to Care: High Illness and Treatment Burden

- Screen for multiple symptoms and impairments (e.g., depression) and poor disease control
- Incorporate validated tools to assess frailty and account for MCC
- Tailor health care assessments and services for each patient based on available resources
- Agree on an individualized care management plan based on shared decision making
- Doing less may be best

(AGS Expert Panel on the Care of Older Adults with Multimorbidity, 2012; Boult & Weiland, 2010; USDHHS, 2010)

Approach to Care: High Illness and Treatment Burden

EXAMPLES of how clinicians can approach high illness and treatment burden in the care of older adults with MCC based on site-specific resources:

- Assess frailty through self-reported health status
- Review medications and other treatments at each visit and any change in therapy
- Incorporate recognized tools into practice
  - Patient Health Questionnaire (PHQ-9), Montreal Cognitive Assessment (MoCA), Beers Criteria, Activities of daily living (ADLs)/Instrumental activities of daily living (IADLs), gait speed, and fall risk assessment

Approach to Care: High Illness and Treatment Burden

EXAMPLES of how clinicians can approach high illness and treatment burden in the care of older adults with MCC based on site-specific resources:

- Evaluate geriatric syndromes:
  - Incontinence, falls, osteoporosis, pressure ulcers, dementia, depression, insomnia, weight loss
- Prioritize assessments based on individual and setting resources
- SIMPLIFY TREATMENT REGIMENS by integration and reducing unnecessary care

Approach to Care: High Illness and Treatment Burden

- Identify issues that affect a patient's quality of life in ways that cut across many health conditions
- Examples may include:
  - Nutrition
  - Physical activity or exercise
  - Function and independence
  - Sleep disturbances
  - Mental health
  - Safety of environment
  - Adequacy of support in current level of care
  - Possible caregiver stress

Approach to Care: Care Coordination and Continuity

- Identify responsible primary care provider and identify team member(s) responsible for care coordination
- Ensure communication to appropriate team member(s), service(s), and caregiver(s)
- Ensure timing of follow-up care and how to access future care
- Ensure care coordination across services and care environments

(Blumenthal & Glaser, 2007; Boult et al., 2011; Boyd & Fortin, 2014; Chaudry et al., 2006; Counsell et al., 2006; Harrison & Verhoef, 2002; McAllister et al., 2007; Robert Graham Center, 2007; Wagner, 1998; Weiland, 2006; Wolff & Roter, 2008)

Approach to Care: Care Coordination and Continuity

EXAMPLES of innovative models to integrate effective continuity and care coordination into care of older adults with MCC:

- Geriatric Resources for Assessment and Care of Elders (GRACE) (Counsell et al., 2006)
  - http://graceteamcare.indiana.edu/home.html
- Guided Care (Boult et al., 2011; Boyd & Fortin, 2011)
  - http://www.guidedcare.org/
- Program for All-Inclusive Care for the Elderly (PACE) (Weiland, 2006)
  - https://www.medicaid.gov/medicaid/ltss/pace/index.html
- Patient-Centered Medical Home (Robert Graham Center, 2007)
  - https://pcmh.ahrq.gov/

Looking at Mrs. Roberts

Mrs. Roberts

- Has with a high illness burden with multiple symptoms and impairments
- Care is driven by single disease targets and multiple care providers
- Has a high treatment burden likely requiring multiple appointments
- Has polypharmacy, challenges in coordinating her care and high self-management requirements

What aspects of Mrs. Roberts' care management will require enhanced coordination among various health care providers?

How would you effectively integrate services across team members and care environments?

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Approach to Care – Practice Implications

Practice Implications:

- Older patients with MCC and complex health care needs will require care by teams of health professionals targeting: patient-centered comprehensive assessment, evidence-based care planning, and monitoring to decrease treatment burden, promotion of patients' (and caregivers') active engagement in care, and coordination of health professionals in the overall care of the patient

Assessment Question 5

As a health care provider caring for Mrs. Roberts, which of the following approaches would you incorporate in your practice to enhance her overall care? (Check all that apply)

a) **Identify health priorities and goals**

b) **Enhance coordination of care across services**

c) **Prescribe medications of limited benefit**

d) **Integrate advance care planning**

e) **Emphasize quality of life**

Assessment Question 5

As a health care provider caring for Mrs. Roberts, which of the following approaches would you incorporate in your practice to enhance her overall care? (Check all that apply)

a) **Identify health priorities and goals (Correct answer)**

b) **Enhance coordination of care across services (Correct answer)**

c) **Prescribe medications of limited benefit**

d) **Integrate advance care planning (Correct answer)**

e) **Emphasize quality of life (Correct answer)**

Provider and Patient Resources
For Effectively Managing MCC in Older Adults

Resources

Where Can You Go To Learn More?

Multiple Chronic Conditions: A Strategic Framework- Optimum Health and Quality of Life for Individuals with Multiple Chronic Conditions
https://www.hhs.gov/ash/about-ash/multiple-chronic-conditions/index.html

American Geriatrics Society Expert Panel on the Care of Older Adults with Multimorbidity
https://www.guideline.gov/summaries/summary/39322/guiding-principles-for-the-care-of-older-adults-with-multimorbidity-an-approach-for-clinicians

Resources

Where Can You Direct Patients, Families, and Caregivers To Learn More?

Health in Aging Foundation

Caregiver Tools and Tips

and

Living with Multiple Chronic Conditions

www.healthinaging.org/

Summary and Take-Home Points

When caring for older adult patients with MCC and complex health needs, it is important to recognize:

- MCC are increasingly prevalent with advancing age
- MCC are associated with poor outcomes and significant expenditures

Summary and Take-Home Points

When caring for older adult patients with MCC and complex health needs, it is important to recognize (continued):

- Managing MCC poses many challenges:
  - Lack of applicable guidelines
  - Conflicting recommendations arise with application of existing guidelines
  - Competing and shifting patient and health care provider priorities
  - Risks of polypharmacy
  - Lack of evidence on how best to treat patients

Summary and Take-Home Points

When caring for older adult patients with MCC and complex health needs, it is important to recognize (continued):

- Addressing the guiding principles can assist in overall care management
    - Understanding patient goals and treatment preferences
    - Ensuring effective communication among health care providers, facilities, and caregivers
    - Recognizing harms associated with medical interventions

Summary and Take-Home Points

When caring for older adult patients with MCC and complex health needs, it is important to recognize (continued):

- Minimizing drug dosing and treatment complexity
- Identifying and addressing lifestyle and psychosocial issues
- Focus on patient's quality of life

Summary and Take-Home Points

When caring for older adult patients with MCC and complex health needs, it is important to recognize (continued):

- A structured approach to care management includes:
    - A holistic, patient-centered approach
    - Assessing overall illness burden
    - Limiting overall treatment burden
    - Enhancing coordination and continuity of care

Summary: Managing Multiple Chronic Conditions in Older Adults

CLINICAL PEARLS:

- As a health care professional, it is important to recognize the challenges for patients living with multiple chronic conditions
- Your approach to these patients should be to provide holistic patient-centered care addressing high illness, treatment, and cost burden
- Prioritize patients with multimorbidity for a different approach to care that integrates patient's needs, preferences, and clinical best practices
- Interprofessional coordinated care is essential to effectively deliver optimal care across settings

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