Medication Safety in Older Adults: Updates 2021

Nicole J. Brandt, PharmD, MBA, BCGP, BCPP, FASCP
Professor, Geriatric Pharmacotherapy, Pharmacy Practice and Science
University of Maryland School of Pharmacy
Executive Director, The Peter Lamy Center Drug Therapy and Aging
Email: nbrandt@rx.umaryland.edu
Lamy Website: https://www.pharmacy.umaryland.edu/centers/lamy/

Daniel Z. Mansour, PharmD, FASCP, BCGP, AGSF
The Peter Lamy Center on Drug Therapy and Aging
Baltimore, Maryland
United States of America
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<th><strong>Employer</strong></th>
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<td>MedStar Center for Successful Aging</td>
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<td>GMAP, HANYS &amp; Penn State</td>
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<td><strong>Advisor/Panelist</strong></td>
<td>AGS Beers Criteria Updates 2012, 2015, 2019, 2022 and Advisory Committee on Interdisciplinary, Community-Based Linkages (ACICBL) The Health Resources and Services Administration (HRSA)</td>
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Nothing that pertains to this presentation to disclose
Our Mission

The Lamy Center is dedicated to improving drug therapy for aging adults through innovative research, education, and clinical initiatives.

OUR VISION

To improve the lives of older adults by optimizing medication safety and use.

We work to strengthen ties between education, practice, and policy by providing opportunities to involve trainees, practitioners, and stakeholders to advance the care of older adults.
Objectives

1. List 2 opportunities to engage in medication safety
2. Highlight three high risk and potentially inappropriate medications used in older adults and the role of the pharmacist
3. Identify two lessons learned from the pandemic and how pharmacists have impacted the care of older adults.
Medication Use Among Older Adults

- Polypharmacy on the rise
- **4.2 billion** prescriptions filled in the U.S. in 2018
- Patients discharged from hospital to SNF with average of **14 medications**

Prescription drug use in past 30 days among 65+ adults: 2015-2016

- None: 13%
- 1 to 4: 40%
- 5+: 48%

Medication Use in LTC: Evidence to Date

• Increasing rates of medication use despite increasing co-morbidities, risk for medication adverse drug events and frailty\(^1\)

• High utilization of medications among dementia patients in the last 2 weeks of life.\(^2\)

• Opportunities to Focus on Deprescribing and Meaningful Clinical Outcomes\(^3\)

\(^1\) Sloane PD, Brandt NJ, Cherubini A et al. (2021) Medications in Post-Acute and Long-Term Care: Challenges and Controversies. JAMDA.


4Ms Framework of an Age-Friendly Health System

The 4Ms are a framework, not a program, to guide all care of older adults.

- **What Matters**: Know and align care with each older adult’s specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.
- **Medication**: If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.
- **Mentation**: Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.
- **Mobility**: Ensure that older adults move safely every day in order to maintain function and do What Matters.
It Takes a Team!
Context of COVID-19 and Older Adults

8 out of 10 COVID-19 deaths reported in the U.S. have been in adults 65 years old and older. Visit CDC.gov/coronavirus for steps to reduce your risk of getting sick.

[cdc.gov/coronavirus]

Impact of COVID-19 on Caregivers

- Coronavirus Disease 2019 (COVID-19) and consequent social isolation has disproportionately impacted the lives of older adults especially those with dementia.

- Caregivers have faced psychological consequences including increased levels of anxiety, depression and caregiver burden.¹

- A further increase in burden may occur due to more interruptions to the social and healthcare constructs leading to increased healthcare cost and utilization.²

How has the Pandemic Impacted You as a Healthcare Provider?
An approach to medication management that focuses on all aspects of the patient’s journey from initiation of treatment (or decisions to forego treatment), to follow-up, to ongoing review and support of their medication treatment plan.
Principles of Medication Optimization

✔ Understanding “what matters” to the patient
✔ Partnering with patients to co-develop in a shared decision-making approach, a personalized medication treatment plan, accounting for health literacy and including options for non-medication-related treatments or decision to forego treatment
✔ Supporting adherence and self-care by the patient
✔ Applying healthcare expertise (clinical and pharmaceutical) to the plan
Principles of Medication Optimization

✔ Ensuring that the patient is on the essential few medications to achieve the desired outcome
✔ Ensuring safety, quality, and better outcomes
✔ Ensuring access to medications; focusing on cost and availability
✔ Communicating with other health care professionals
✔ Providing appropriate monitoring and review of a treatment plan
✔ Coordinating care for patients transitioning out of acute care
Welcome to this implementation guide for improving medication management in post-acute and long-term care settings during the COVID-19 pandemic.

Its goal is to improve resident-centered health and well-being by reducing use of unnecessary medications, simplifying medication management, and reducing opportunities for transmission of COVID-19 between residents and staff. By streamlining medication administration, these changes may
Background

• Residents of post-acute and long-term care facilities often prescribed multiple medications which are dosed multiple times per day

• Often this is:
  • Unnecessary & potentially harmful
  • Burdensome to residents (e.g. fingersticks, vital signs many times per day)
  • Burdensome to staff.
    • Nursing staff spend enormous amounts of time each shift passing meds, thus reducing availability for other direct care activities
  • Increases potential infection transmission between staff and residents as a result of multiple up-close contacts
Goal of Implementation Guide

• To improve resident-centered health and well-being by:
  • Reducing use of unnecessary medications
  • Simplifying medication management &
  • Reducing opportunities for transmission of COVID-19 between residents and staff

• Furthermore, by streamlining medication administration, these changes may also increase the time that staff have available for other direct care activities.

• Intended to complement (not replace) other efforts to improve care quality and safety and infection control

• Intended for use during COVID-19 pandemic
Recommendations-As Applicable

Examples

- Discontinue vitamins, herbals
- Change meds from 2x/day to once-daily formulations
  - Metoprolol, metformin
- Consolidate bedtime meds with morning meds
  - Statins, urinary alpha-blockers
- Reduce unnecessary monitoring
  - Blood glucose
- Convert nebs to hand-held inhalers
Acknowledgements

Task Force Members

Co-Chairs: Drs. Mike Steinman and Nicole Brandt

- Alice Bonner, PhD, RN, FAAN
- Cynthia M. Boyd, MD, MPH
- Donna Marie Fick, RN, GCNS-BC, PhD, FAAN
- Jennifer L. Hardesty, PharmD, FASCP
- Christopher E. Laxton, CAE
- Lona Mody, MD, MSc
- Fatima A. Naqvi, MD, CMD, MMMT, FAAFP
- Jonathan Norton, BS
- Catherine Sarkisian MD, MSHS
- Fatima Sheikh, MD, MPH
- Jennifer Tjia, MD, MSc, FAAHPM
- William Vaughan BSN, RN
- Chad Worz, PharmD, BCGP
- Barbara J. Zarowitz, PharmD, FCCP, BCPS, BCGP, FASCP

External Reviewers and Advisors

- S. Orion Courtin, MD, MHS
- Barbara Farrell, BScPhm, PharmD, ACPR, FCSHP
- Frank Federico, RPh
- Erin M. Foti, PharmD, BCGP
- Elizabeth Galik, PhD, CRNP, FAAN, FAANP
- Steven M. Handler MD, PhD, CMD
- Daniel Haimowitz, MD
- Peter Hollmann, MD
- Holly Holmes, MD, MS
- Michelle Laughman
- Cathleen Lawrence, RN, MA
- Sunny Linnebur, PharmD
- Nancy Lundebjerg, MPA
- Jay Luxenberg, MD
- Cora Martin, RDN, CSG, LD
- Lynn McPherson, PharmD, MA, MDE, BCPS, CPE
- Amanda Mixon, MD, MSPH
- Joseph Ouslander, MD
- Joshua Pevnick, MD, MSHS
- Barbara Resnick, PhD, RN, CRNP, FAAN, FAANP
- Todd Semla, MS, PharmD, BCGP, FCCP, AGSF
- Belinda Setters, MD
Implementation: Tactics and Lessons Learned
Key issues in implementation - Interdisciplinary Team

- Burnout consideration
- CMD Involvement
- Person Centered Care
- Ongoing Communication
- Work flow Leadership support
- IDT Team Structured Meetings
Attention to potential harm and communication

Communication at all levels with re-evaluation

Residents, families

Providers, Care Partners, IDT teams
Unintended harms

- Failure to Restart Medication if DC temporary
- Perception of abandonment - fewer Visits
- Return of Symptoms or Markers
Unintended Harm

- Social Isolation
- Increased Cost
- Legal or survey consequence if unintended outcome
Medication Optimization - Conclusion

Guide is a resource to help support PA-LTC teams to reduce medication burden.

Review and adapt to your local facility circumstances.

The process is as important as the medication recommendations and pay attention to communication, systems of care, as well as unintended consequences.

Not a substitute for clinical judgement: recommendations should be evaluated in light of each resident’s clinical situation and preferences.
Patient Story
Patient Story

STH is a 72-year-old man who was seen by an interprofessional team for a comprehensive assessment due to concerns with not having a primary care provider. He was hospitalized 2 months ago due to a urinary tract infection and developed delirium while at the hospital. He was then discharged to a skilled nursing facility (SNF) for rehab. Both of his adult children have moved closer to support him staying in his own home living with his wife.

PMH: Chronic pain, hypertension, anxiety, depression, dyslipidemia

SH: Born in Vietnam; Lives with his wife in their own home in MD and have a son (pharmacist) and daughter (teacher). He fought in the Vietnam War and primarily speaks Vietnamese. Denies alcohol or illicit substance use. Smoked but quit 5 years ago.
STH’s Medication History

• Medication taking behaviors: did not take meds until son started setting up and family reminds. Still is missing doses but less often. Does NOT like to take meds.

• Medication List during PCP visit:
  • Acetaminophen 500mg 1 tablet threes times daily for chronic pain
  • Gabapentin 300mg in the evening for pain
  • Amlodipine 2.5mg 1 tablet daily for blood pressure
  • Losartan 100mg daily for blood pressure
  • Metoprolol succinate 100mg daily for blood pressure
  • Atorvastatin 40mg 1 tablet daily for cholesterol
  • Vascepa 1gm twice daily with meals for cholesterol
  • Escitalopram 20mg daily for depression/anxiety
  • Lorazepam 0.5mg at bedtime for anxiety
  • Quetiapine 25mg in the morning and 50mg at bedtime for irritability
  • Tamsulosin 0.4mg 1 capsule daily for BPH
  • Centrum Silver tablets for health.

Prevents use of low-dose renin-angiotensin-angiotensin inhibitors.
Audience Response Question

What medication would you recommend deprescribing?

A) Lorazepam
B) Amlodipine
C) Atorvastatin
D) Quetiapine

CHAT IN YOUR RATIONALE
1 year later during the Pandemic

Medication Related Review of Systems

This is a 73 yr old man who is accompanied by his daughter, who is helping the family to take care of him. She notes that her brother, who is a pharmacist is actually the one setting up the medications or works with his mom to set them up. Pt is taking medications only twice daily and son notes that a family member actually administers them to him.

From talking with the son as well as daughter about his medications, the following was noted:
- **Gen:** today he is tired due to having an appt with the psychiatrist and his first dose of COVID vaccine.
- **CV:** still taking the metoprolol; losartan; atorvastatin plus Vascepa; amlodipine -> family notes BP ranges and is usually elevated when he gets agitated.
- **Resp:** son notes he is congested and was wondering based on his history of smoking if he may actually have COPD; has used Flonase; ProAir and Mucinex in the past but not on anything at this time.
- **GI:** daughter was worried about reflux and how he eats; rantidine is on the list but per the son he does not set up in the pillbox rather it was something over the counter to help with symptoms of coughing up food and indigestion. Son notes his dad uses to be on a PPI
- **GU:** admits he gets up several times a nite to go to the bathroom; was giving the tamsulosin BID
- **Psych:** under the care of Dr. F and sleep behaviors as well as outbursts are still an issue at times; family does not feel that the memantine has helped with the increased doses and memory is progressing.
1 year later during the Pandemic

Medication List

1. Acetaminophen 500 mg oral tablet, 500 mg = 1 tab, PO, 3x/day, PRN
2. AmLODIPine, 2.5 mg = 1 tab, PO, Daily
3. Atorvastatin 40 mg oral tablet, 40 mg = 1 tab, PO, Daily
4. Gabapentin 300 mg oral capsule, 300 mg = 1 cap, PO, Nightly, Still taking, not as prescribed: Actually increased to twice daily.
5. Losartan 100 mg oral tablet, 100 mg = 1 tab, PO, Daily
6. Melatonin, 6 mg, PO, Nightly
7. Memantine 5 mg oral tablet, See Instructions, Take 1 tablet in AM + 2 tabs (= 10mg) in the PM for 2 weeks, then increase to 2 tablets (= 10mg) twice a day, Still taking, not as prescribed: Actually taking 2 tablets twice daily now. Family feels getting worse.
8. Metoprolol succinate 50 mg oral tablet, extended release, 100 mg = 2 tab, PO, Daily
9. SEROquel 25 mg oral tablet, See Instructions, 1 tablet in AM + 1 tab in the afternoon + 2-3 tabs at bedtime
10. Sertraline 100 mg oral tablet, 100 mg = 1 tab, PO, Daily
11. Tamsulosin 0.4 mg oral capsule, 0.8 mg = 2 cap, PO, Daily
12. Vascepa 1 g oral capsule, TAKE 2 CAPSULES (2 GRAMS) BY MOUTH 2 TIMES PER DAY WITH MEALS
13. Rantidine 150, 150 mg = 1 tab, PO, Daily
Audience Response Question

What medication would you recommend deprescribing?
A) Memantine  
B) Ranitidine  
C) Melatonin  
D) Quetiapine

CHAT IN YOUR RATIONALE
1991
• 1st criteria published
• Criteria specifically for nursing home patients

1997
• Criteria expanded for use in all elderly patients

1999
• Center for Medicare and Medicaid Services adopts Beers Criteria for nursing home regulation

2003
• Implemented into Medicare Part D, National Committee for Quality Assurance, and Healthcare Effectiveness Data and Information Set

2012
• AGS oversees the Beers Criteria and updates
• Beers Criteria further adopted into quality measures

2015
• Addition of new sections like introduction of drug-drug interactions, renal dosage tables, how to use and alternatives papers

2019
• Published a year later
• Continue to refine process and collaborations

2021
• AGS working on updates
AGS Beers Criteria Tables

- Potentially Inappropriate Medications (PIMS) to Avoid in Older Adults
- Drug-Syndrome Interactions
- PIMS to Use w/ Caution
- Drug-Drug Interactions
- Renal Function Considerations
- Drugs with Strong Anticholinergic Properties
Age-Friendly University (AFU)

• UMB and UMBC celebrated becoming first universities in the state of Maryland to receive AFU distinction.
• Launch event was held on Nov. 21, 2019 at the Gladhill Boardroom and attended by over 85 faculty, staff and students from both campuses.
• Keynote speakers:
  − Jay A. Perman, MD, (then) President, UMB
  − Freeman A. Hrabowski III, PhD, President, UMBC
  − Amy Berman, RN, LHD, FAAN, Senior Program Officer, John A. Hartford Foundation

The UMB/UMBC Age Friendly University initiative is organized around five themes:

✔ Theme 1: Workforce Development
✔ Theme 2: Community Engagement
✔ Theme 3: Expand Engagement in Aging Research & Dissemination
✔ Theme 4: Address Barriers Related to Aging & Our Physical Environment
✔ Theme 5: Facilitate Age-Friendly Efforts Across the State of Maryland
Medication Safety: Pharmacist’s Role in the Community

• High risk and Potentially Inappropriate Medications:
  • screening
  • opportunities to partner with community

• HRSA Geriatric Workforce Enhancement Program
  • Involvement with Age Friendly
    • University of Maryland
    • University of Maryland Medical Center
    • County Partnerships & State of Maryland
    • IPACE Fellowship
The University of Maryland, Baltimore Aging in Place Program is an enduring initiative that builds off an existing relationship and history of geriatrics care being applied to a community setting that promotes team-based learning to meet the needs of local senior housing communities.
Aging in Place Program
Development & Improvement

- CIPP 621 is a graduate level 3 credit course
- IPE Students learn with, from and about each other
- IPE students served various aspects of older adults’ needs
- MSW, RDH, DNP, MD, PharmD, RN to BSN, PA, PT, AuD, DDS
<table>
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<tr>
<th>Academic Year</th>
<th>Discipline Participation</th>
<th>Activities</th>
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<tr>
<td>2015-2016</td>
<td>Pharmacy, Social Work, Nursing</td>
<td>Individualized resident care, Blood pressure screening, Mild Exercise program</td>
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<tr>
<td>2016-2017</td>
<td>Addition: Medicine, Physical Therapy</td>
<td>Addition: Population Based learning via topic focused health fairs</td>
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<tr>
<td>2017-2018</td>
<td>Addition: Audiology, Dentistry, Dental Hygiene</td>
<td>Ongoing population based learning via topic focused health fairs.</td>
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<td>2019-2020</td>
<td>Addition: Course CIPP 621/PHMY5011, Doctor of Nursing Practice, Physician Assistant</td>
<td>Fall 2019 last semester for on-site activities. Spring 2020 First semester to have international students join us via virtual means. However, on March 12, 2020, a university mandate was issued to pivot all activities to a virtual platform including virtual health education sessions for the community</td>
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<td>2020-2021</td>
<td>Addition: Nursing (MSN), Continuation of the presence of pharmacy students from University of X</td>
<td>Introduction of elements of the wellness visit virtually in the team’s one-on-one virtual encounters</td>
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2015-2021

- Number of Sites: 5
- Number of One-on-One Neighbor Encounters: 445
- Number of Student Led Presentations for the Neighbors and Staff: 215
- Number of Students Involved: 178
- Number of Faculty and Student Led Clinical Debriefing: 136
- Number of Student Journals Gathered: 142
- Pre and Post Surveys (AITCS and TDMQ)
Examples of Activities Provided

- Coordination of immunizations
- Falls screening
- Education Medicare D Open Enrollment
- Oral care and dental hygiene
- Mental health needs/sleep hygiene
- Cardiovascular health and blood pressure monitoring (Stroke prevention)
- Nutrition health
- Safety and health during COVID-19
University of Maryland at Baltimore - Aging in Place Program
The Student Experience
We also learned as an IPE team the inadequacies of healthcare delivery to an especially compromised geriatric population.

We were able to understand each discipline’s role in a number of healthcare processes.

e.g., Something as “simple” as a healthcare provider prescribing a medication to a patient.

We learned to respect our peers’ roles which allowed for shared decision-making.

We shared our experiences at our monthly interprofessional education clinical (debriefing) meetings.
Lessons Learned from the Shared Virtual Classroom

- Opportunities/Challenges
  - Real vs. simulated clinical experience
  - Optimal group size? (Interprofessional teams, Large group, debrief)
  - Digital divide and access

- Empowering and engaging all professions
  - Interprofessional clinical huddles and debrief
  - Engaging interprofessional Faculty
What Else Can Be Done?

- How are we balancing education and clinical needs?
- Medication Assistance:
  - How much can we empower/support them?
  - What tactics can we employ to improve the medication safety to address their medication related needs?
# Medication Safety

**Medication Log Sheet**

<table>
<thead>
<tr>
<th>Name of Medication</th>
<th>Dose</th>
<th>When to take</th>
<th>With or without food?</th>
<th>What is the medication for?</th>
<th>Date started/ date stopped/ date dose changed</th>
<th>Doctor who started the med.</th>
<th>Side Effects</th>
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*Image and text content are placeholders.*
## Medication Resources

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<th>Additional Information</th>
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DeprescribingResearch.org

Please reach out – our goal is to help you
Resources Specific to Caregivers – Videos

Video: The Role of Family Caregivers in Managing Medications for Elderly Loved Ones

In the second of six videos for caregivers and health care providers, learn what medication reconciliation means, the roles of family caregivers and health professionals, and the problems reconciliation can identify.

The Centers for Medicare and Medicaid Services (CMS) and the United Hospital Fund's Next Step in Care campaign collaborated on a series of six videos called “Helping Patients & Family Caregivers Take the Next Step in Care: Medication Management.” Many of the videos refer to Next Step in Care Family Caregiver guides, which are available on the Next Step in Care website.


Family Caregiver’s Video Guide to Managing Medications

Family caregivers often manage complex medication routines, provide wound care, and perform other challenging medical/nursing tasks. These videos, produced by AARP Public Policy Institute in collaboration with Betty Irene Moore School of Nursing at the University of California Davis, The United Hospital Fund, and the Family Caregiver Alliance can help prepare caregivers for those tasks.

Giving Insulin Injections

• Find a clean, clutter-free surface to place items needed to give the injection.
• Make sure you have all the items together that you need before you begin.

Dealing with Dementia Related Resistance

Beyond Pills: Eye Drops, Patches, and Suppositories

https://www.nextstepincare.org/Videos/
“Even in old age they will still produce fruit; they will remain vital and green.” (Psalm 92:14)

Contact Information:
Nicole J. Brandt, PharmD, MBA, BCGP, BCPP, FASCP
Email: nbrandt@rx.umaryland.edu
Daniel Z. Mansour, PharmD, BCGP, FASCP, AGSF
Email: dmansour@rx.umaryland.edu
Questions and Discussion

Thank you for attending!