UNIVERSITY of MARYLAND SCHOOL OF PHARMACY
THE PETER LAMY CENTER ON DRUG THERAPY AND AGING

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Optimizing Medication Management during the COVID-19 Pandemic: Implementation Guide for Post-Acute and Long-Term Care

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Please visit https://www.pharmacy.umaryland.edu/PALTC-COVID19-MedOpt for the latest version of this implementation guide. If you received this guide without visiting the website, please email us at lamycenter@rx.umaryland.edu so that we can alert you to updates and solicit optional feedback about the guide and opportunities to improve it.

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 also increase the time that staff have available for other direct care activities

Please see the links below to access different parts of the guide. We suggest first reviewing "How to Use this Implementation Guide." Specific recommendations are provided in the "Recommendations" section, with an accompanying checklist for easy reference. Review the other sections as well; they are critical for safe and effective implementation of these recommendations. Recommendations should be implemented using a **resident-centered** approach and in a manner that aligns with facility, staff, and pharmacy workflow.

Note that this guide is focused on medication-related issues and should complement rather than replace other efforts to improve care quality and safety and infection control. Please send us your feedback about the guide to lamycenter@rx.umaryland.edu to help inform our development of future versions.

Supplement: Additional materials added to the Implementation Guide on 24 April 2020 include (1) a disclaimer, and (2) a reference list.

Section	Key points
How to Use this Implementation Guide	Recommendations in this guide are voluntary and advisory in nature and should not substitute for clinical judgment. Adaptation to local circumstances will be needed and is encouraged.
Recommendations Checklist	Brief summary of recommendations in checklist format.
Recommendations	o **Box:** Stepwise approach to prioritizing and implementing recommendations o **Table 1:** Medications that may be discontinued, reduced, or changed o **Table 2:** Changes to how medications are administered and monitored o **Table 3:** Appropriate alignment of medication administration times o **Table 4:** Medication issues specific to COVID-19 and infection prevention
Regulatory Considerations	During the COVID-19 pandemic it is critical to evaluate medication administration, management, and monitoring to ensure that facility teams can continue to meet the needs of each resident. Regulations supporting such changes include State Operations Manual Tags F757, F759, F760, and/or F865.
Communication Around Medication Changes	Communication around medication changes is essential for all members of the team. Sample letters to prescribers and to residents and their family and care partners are included in this section.
Avoiding Unintended Consequences	Attention to potential unintended consequences such as re-emergence of symptoms of disease or worsening social isolation is essential to maximize benefits and minimize potential harms.
Additional Resources	Dose conversion table, sample letters, and other useful resources
About this Guide	How this guide was developed.

If you have questions or comments, please contact us at lamycenter@rx.umaryland.edu

How to Use this Implementation Guide

Key Points
Review recommendations with interdisciplinary team, solicit leadership support
Consider a stepwise, resident-centered approach for implementing recommendations
Adjust and individualize recommendations for specific resident clinical situations and local circumstances
For some medications, temporary discontinuation (a “pause”) may be advisable. In these cases, a process needs to be established for potential future resumption
Attention to potential harms and communication among providers, residents, and families and care partners is essential

1) Members of the interdisciplinary team should review the recommendations in this guide and determine which recommendations could be applied for their residents. Leadership support to guide and facilitate implementation is important, as is attention to workflow.

2) Consider a stepwise, **resident-centered** approach for implementing recommendations in your facility. A suggested framework for implementing changes is:
    - *Step 1:* Changes that are essential for infection control
    - *Step 2:* Changes that are generally low risk, can be quickly evaluated for individual appropriateness, and can be done immediately
    - *Step 3:* Changes that are generally low risk but may take more time for person-centered evaluation and communication, implementation, and monitoring
    - *Future Steps:* There are additional types of medication optimization that are not addressed here because they may be better suited to a longer-term approach. This includes medication changes that often require slow medication tapers and/or close monitoring for withdrawal effects (e.g. psychotropics, dementia medications, certain blood pressure medications).

3) Recommendations are advisory. They should be adapted to local circumstances (e.g., facilities’ current and future risk of COVID-19) and individualized for **residents’ clinical situations and person-centered goals of care**. Suggestions in this guide **should not** substitute for clinical judgment.

4) Temporary discontinuations may be appropriate when the medication serves a useful therapeutic purpose but complicates medication administration at a time when streamlining administration can help address threats posed by COVID-19. Medications listed for temporary discontinuation in the tables are generally safe to be stopped for a period of several weeks or months.

- *It is essential to keep track of medications whose discontinuation is intended to be temporary and to have a system for re-evaluating need for these medications at the appropriate time and re-introducing them if still indicated.*
- *Medications whose near-term use is essential for health should not be stopped.*

5) Close attention should be paid to potential unintended consequences from medication changes. For example, this may include worsening of symptoms or increased social isolation from fewer resident contacts with staff. In addition, communication among the care team, residents, and families and care partners is essential prior to implementing recommendations. This can help identify and avoid potential areas of confusion, misinterpretation, or conflict.

DISCLAIMER: Recommendations in this Implementation Guide serve to inform clinical practice on improving the safety and quality of medication use for older adults in post-acute and long-term care facilities during the COVID-19 pandemic. By downloading and/or viewing this Implementation Guide you hereby agree and consent that this is not medical advice and does not substitute professional judgment or the need to adhere to specific federal, state or local laws or regulations.

Optimizing Medication Management during the COVID-19 Pandemic

Post-Acute and Long-term Care Facility Checklist

DONE POTENTIAL CHANGE

▢ Discontinue medications

Medications that are often unnecessary, provide no to minimal clinical benefit, e.g.,

- Iron, vitamins including multivitamins, Vitamins A, B1, B3 (Niacin), B6 (Pyridoxine), E, Biotin, Coenzyme Q10
- Herbal medications: e.g., Ginkgo Biloba, Ginseng, Valerian Root, Echinacea, Red Yeast Rice, Garlic, Saw Palmetto, Flaxseed
- Others: Docusate, cranberry tablets, glucosamine, low-dose fish oil, probiotics, appetite stimulants

Medications often discordant with goals of care and potential time to benefit, e.g.,

- Long-term preventive medications (e.g., aspirin, statins) in residents with comfort-oriented care goals or limited life expectancy

Medications appropriate in many residents but safe to temporarily discontinue, e.g.,

- Calcium, magnesium, bisphosphonates, Vitamin B12, Vitamin D

▢ Reduce frequency of medication-associated monitoring

- Reduce frequency of monitoring (e.g. heart rate, finger sticks) to track drug effects especially if resident is stable and prior monitoring values/parameters stable. If appropriate, discontinue medications that require frequent monitoring.

▢ Reduce medication dosing frequency

- Change from short- to long-acting formulations, e.g., metformin, metoprolol, carvedilol, diltiazem, others
- Change analgesic regimens to allow greater spacing between doses, consolidate laxatives
- Switch from short- to long-acting insulins, reduce PPIs from twice daily to daily or discontinue

▢ Change timing of doses

- Move statins (e.g., atorvastatin), alpha blockers (e.g. tamsulosin), levothyroxine to consolidated dosing times

▢ Administer medications differently

- Change medications that require crushing to liquid formulation if possible; consider liquid/powder potassium

▢ Consolidate administration times

- Consolidate dispensing times - e.g., q12 hours to BID, eliminate outlier medication administration times
- Liberalize allowable time period to administer meds

▢ Reduce risks of COVID-19 transmission

- Use hand-held inhalers (with spacer if possible) instead of nebulizers; consider product(s) availability and usability
- Where appropriate, change acetaminophen from regular to as-needed dosing to aid in COVID-19 fever surveillance
- Where possible, avoid directly touching residents when passing meds
- Reduce unnecessarily frequent monitoring; identify alternatives for meds that require frequent administration

BOX:

Stepwise approach to prioritizing and implementing recommendations

Consider a stepwise approach for implementing recommendations in your community. A suggested approach is listed below, although adaptation is encouraged based on local circumstances.

Priority for implementation

1. Changes that are essential for infection control

- Transition from nebulizers to hand-held inhalers for residents needing inhaled therapy when feasible, safe, and available. (Table 4)
- Among residents with known or suspected COVID-19: changes that reduce frequency, duration, and infection risk of medication passes (All tables)

2. Changes that are generally low risk, can be quickly evaluated for individual appropriateness, and can be done immediately.

- Discontinuation of medications that do not provide benefit for most residents, can be stopped abruptly, and do not need extensive monitoring after discontinuation (Table 1)
- Change from short- to longer-acting medications where conversion is routine and changes are typically well-tolerated (Table 1)
- Conversion to dosing forms that are easier to use and administer (Table 2)
- Consolidate and liberalize administration times for medications that do not need to be given at very specific times or intervals (Table 3)
- Enhanced hygiene measures during medication passes (Table 4)

3. Changes that are generally low risk but may take more time for implementation, individual evaluation, communication with care team and resident, and monitoring

- Changes in insulins, analgesic regimens (Tables 1 and 2)
- Changes in monitoring regimens (Table 2)
- Reduction in long-term preventive medications among residents with comfort-oriented care goals or limited life expectancy (Table 1)
- Other changes not listed in this guide such as reductions in psychotropic medication use and overaggressive management of hyperglycemia and blood pressure

TABLE 1:

Medications that can be discontinued, reduced, or changed

Type of action: **Temporarily or permanently discontinue medication**		
Medication(s)	**Options**	**Considerations**
Oral iron supplements	Discontinuation if no indication. Reduction in dose frequency to every-other-day dosing if iron supplementation is indicated.	Every-other-day dosing results in better absorption than daily use. Use in the absence of iron deficiency anemia is not indicated except for people receiving erythropoietin-stimulating agents (ESAs).
Vitamins (oral): * Multivitamins Vitamin A Vitamin B1 (Thiamine) Vitamin B3 (Niacin) Vitamin B6 (Pyridoxine) Vitamin E Biotin Coenzyme Q10	Discontinuation	In most circumstances, little evidence supports routine vitamin supplementation in the absence of established deficiencies . Certain exceptions may apply; see footnotes.
Herbal medications: For example Ginkgo Biloba Ginseng Valerian Root Echinacea Red Yeast Rice Garlic Saw Palmetto Flaxseed	Discontinuation unless evidence of clinical benefit for resident	Little evidence of benefit for most herbal medications, often used for unclear indications, and may result in adverse drug effects and drug-drug and drug-nutrient interactions.

Other medications: Docusate Cranberry tablets Glucosamine Fish Oil (low dose, i.e., < 2 grams/day) Probiotics (long-term use) Appetite Stimulants (e.g., Megestrol, Dronabinol)	Discontinuation unless meaningful benefit from use.*	
Long-term preventive medications: For example: Statins Aspirin and other antiplatelets	Discontinuation if resident's goals of care are oriented exclusively toward comfort or resident has limited life expectancy	Requires clarification of goals of care. Medications for long-term prevention provide limited benefits for residents at or near the end of life.
Calcium **Magnesium**	**Temporary** discontinuation if resident has difficulty swallowing but medication is still indicated. Permanent discontinuation if unnecessary.	Difficulty swallowing may lead to cough reflex and close contact between nurse and resident. For most uses, short-term discontinuation is safe. Do not discontinue in residents with known history of clinically important hypocalcemia or hypomagnesemia.
Oral bisphosphonates	**Temporary** discontinuation (to reduce the need for additional medication pass)	Often appropriate, but special timing considerations often require an extra medication pass, increasing opportunities for exposure and workload. Temporary discontinuation unlikely to be harmful.
Vitamin B12 **Vitamin D**	**Temporary** discontinuation if established indication (to reduce pill burden). Permanent discontinuation if no established indication (although may require monitoring)	Short-term discontinuation unlikely to have adverse clinical effects. If indication or baseline serum levels unclear, consider re-evaluate levels in approximately 6 months, determine if resumption is indicated

Type of action: **Change to medication formulations or regimens that require less frequent dosing**		
Medication(s)	**Options**	**Considerations**
Metformin **Metoprolol, carvedilol, diltiazem** **Other medications as appropriate**	Change from short-acting to longer-acting formulations (e.g., metoprolol succinate, carvedilol CR). Dose less frequently	Use caution if resident takes medications crushed, as long-acting formulations often not crushable. Avoid substitutions that may result in unintended change in medication purpose (e.g., changing short-acting opioids used as needed to scheduled, long-acting varieties). Be mindful of cost and formulary considerations. Avoid changing to long-acting sulfonylureas (e.g., glyburide, glimepiride) and other medications that may increase risk of adverse events (e.g., hypoglycemia) or result in suboptimal disease control. See footnote and dose conversion table for common medications in "Additional resources" section.
Analgesics	Consider reducing dosing frequency and/or switching to longer-acting analgesic formulations or alternatives, as appropriate	See table in "Additional resources" section for guidance on less frequent acetaminophen dosing. See footnote for considerations in people taking chronic opioids and gabapentin.
Laxatives	Consider consolidating e.g., twice-daily senna to once-daily, or administer multiple laxatives at same time.	Also evaluate if regimen may be de-intensified
Short-acting insulins (e.g., correctional or sliding scale)	Consider discontinuation and switch to only long-acting insulin	In older adults with type 2 diabetes, short-acting insulins often confer little clinical benefit and impose substantial burden including insulin administration, frequent blood glucose monitoring, and hypoglycemia. See footnote for cautions.*
Proton pump inhibitors (PPIs)	Re-evaluate chronic use per deprescribing guidelines.* May include change from twice-daily to once-daily dosing, or tapering from once-daily dosing to full discontinuation	Often overused. Abrupt discontinuation may lead to rebound symptoms.

* Vitamins: Specific deficiencies of vitamins listed here are rare in most people. Some of the more common indications for which use may be appropriate include:

- **Multivitamins:** Does not include AREDs preparations (e.g., Eye-Vite) used for treatment of macular degeneration. Indications for "regular" multivitamins include history of bariatric surgery with malabsorption
- **Vitamin B1 (thiamine)**: Wernicke's encephalopathy or people with alcohol use disorder at risk for this condition
- **Vitamin B3 (niacin)**: Malabsorptive conditions including people who have had bariatric surgery, hyperlipidemia unable to tolerate or not responsive to statin therapy
- **Vitamin B6 (pyridoxine)**: Concurrent use of certain drugs including isoniazid
- **Biotin**: People receiving total parenteral nutrition
- **Vitamin A**: Few indications in developed countries
- **Vitamin E**: Disorders affecting the small intestine including pancreatic exocrine insufficiency, small bowel resection, severe cholestatic liver disease
- **Co-enzyme Q10:** Little evidence to support benefit for prevention or treatment of statin-associated muscle symptoms and cardiovascular risk reduction

* Other medications:

- **Docusate**: Often ineffective for constipation
- **Cranberry tablets:** Evidence of benefit to prevent urinary tract infections is weak. May interact with warfarin; check INR after stopping.
- **Glucosamine:** Efficacy for knee osteoarthritis is limited, although there may be strong placebo effects.
- **Fish oil (low dose, i.e., <2 grams/day):** Little evidence for benefit of low-dose fish oil for general primary or secondary cardiovascular prevention; higher doses may yield some cardiovascular benefits. Fish oil is generally indicated and effective for management of hypertriglyceridemia.
- **Probiotics:** Long-term use generally not indicated; exceptions may include management of chronic gastrointestinal inflammatory disease (e.g., ulcerative colitis, Crohn's disease, pouchitis after gut anastomosis). Probiotics may reduce constipation.
- **Megestrol, dronabinol:** Megestrol and dronabinol often ineffective for substantial weight gain, can cause serious adverse events.

* Medication formulation changes:

- **Metformin:** Single-daily dosing of IR formulation up to 1000 mg given at a single dose is well-tolerated by many people, although monitoring for GI upset is warranted. Different ER formulations may widely differ in price.
- **Metoprolol, carvedilol, diltiazem:** Changes from short- to long-acting versions are typically well-tolerated.
- **Opioids:** Residents taking regularly scheduled opioids several times per day, every day may be considered for transition to longer-acting formulations. Transition to long-acting formulations is NOT recommended for people with short-term opioid use or those taking opioids intermittently or as-needed.
- **Gabapentin:** Often dosed three times per day, may be possible to administer same total daily dose twice daily or daily at evening/bedtime.
- **Short-acting insulins:** Changes to insulin regimens should be individualized. Short-term monitoring after changes may be needed to ensure clinical stability. Certain patients, including those with Type 1 diabetes, require short-acting insulin and are not candidates for discontinuation. ***Changes involving insulin often require individualization and heighted short-term monitoring, so may be more difficult to achieve in the short term but can substantially reduce medication administration burden and contact between nurses and residents*.**
- **Proton pump inhibitors:** For guidance on indications and process of dose reduction and deprescribing see https://deprescribing.org/resources/deprescribing-guidelines-algorithms/

TABLE 2:

Changes to how medications are administered and monitored

Type of action: **Reduce frequency of medication-associated monitoring**		
Medication(s)	**Options**	**Considerations**
Antihypertensives **Digoxin** **Diabetes medications**	Consider reducing the frequency of monitoring (e.g., pulse, blood pressure, fingerstick glucose) to track drug effects especially if resident and prior values have been stable. Does not apply to monitoring related to COVID surveillance.*	Also, consider discontinue medication if not indicated, especially short-acting insulins and as-needed blood pressure medications. Intensive monitoring of these medications during the COVID-19 pandemic in a resident who is well managed and stable may be unnecessary, impose burdens on residents and staff, and increase risk of infection transmission.

Type of action: **Administer medication at a different time to reduce number of medication passes**		
Medication(s)	**Options**	**Considerations**
Statins **Alpha blockers** (e.g., tamsulosin, alfuzosin, terazosin) **Levothyroxine** **Other medications as appropriate**	Change administration time to when other medications are dispensed. Discontinue if not indicated.	Statins, alpha blockers, and levothyroxine are often prescribed for specific times. In many cases, efficacy and safety of these medications is not affected by special dosing schedules, so timing can be changed to simplify administration. See footnote for additional comments.*

Type of action: **Administer medication differently**		
Medication(s)	**Options**	**Considerations**
Medications that require crushing (various)	Change to liquid formulations	Crushing medications can be time-intensive. Be mindful of potential price differences between pill/capsule and liquid formulations. Use caution for medications where precise dosing is important and meaningful differences in dose or pharmacokinetic effects between pill/capsule and liquid preparations, e.g., phenytoin.
Potassium	Change to liquid/powder formulations if possible and available	Difficulty swallowing potassium may lead to cough reflex and close contact between nurse and resident. Check with pharmacy / pharmacist about available options.

* Monitoring, for example blood glucose, blood pressure, pulse:

- Daily or more frequent blood glucose monitoring is generally not necessary for residents on oral-only diabetes medication regimens who are stable. Pulse and/or blood pressure checks taken prior to administering blood pressure medications to ensure that parameters are within limits prior are often not needed among residents who are stable and for whom prior values have been consistently within limits.

* Considerations for timing of medication doses:

- **Statins**: Long-acting statins that may be dosed any time of day include atorvastatin, lovastatin XR, pitavastatin, pravastatin, and rosuvastatin. Cholesterol-lowering effects of shorter-acting statins including fluvastatin, lovastatin IR, and simvastatin may be more sensitive to timing of dose, with preference for evening dose. Consider changing to long-acting statin.
- **Alpha blockers:** Can cause positional hypotension when first initiated or shortly after doses are increased, but effects wane with continued use, and frequency of nocturia is not strongly influenced by dose timing. Prazosin is often used for non-urinary indications such as PTSD, and in this setting nocturnal dosing to prevent night terrors should not be changed.
- **Levothyroxine:** Absorption is affected by timing relative to food intake and certain other medications (e.g., within 4 hours of calcium, iron-containing products, or cholestyramine). For most residents, reasonable to administer at a convenient, consistent time (e.g., with regular morning medication pass). If timing of administration changes, may require recheck serum levels and modify dose if needed.

TABLE 3:

Appropriate alignment of medication administration times

Please also see the "Regulatory Considerations" section for regulatory issues related to recommendations in this table.

Issue	Recommendation
Medications with similar dosing schedules, for example: - Daily (QD) and qAM - Twice daily (BID) and q12 hours	Similar schedules can often be consolidated. For example, many medications that are ordered for q12 hour dosing can safely be administered BID, and vice versa. Exceptions include medications that require precise dosing times. See footnote for details.*
Liberalization of allowable time period for medication administration	Facility policies may adopt less exact time windows for distribution of medications that do not require precise dosing times.
Elimination of outlier medication administration times	Evaluate outlier medication pass times such as where only one medication is administered at that time. If possible, adjust to align with another medication pass.

* Medications that typically require precise dosing times include (but are not limited to):

- Antibiotics
- Antiparkinsonian medications
- Chemotherapeutic and other antineoplastic therapies
- Certain immunosuppressive medications
- Scheduled opioids
- Medications that should not be administered within a specified time period of one another (e.g., antacids and fluoroquinolones)
- Medications that require dosing prior to or after meals such as short-acting insulins, meglitinides (e.g., repaglinide), alpha-glucosidase inhibitors (e.g., acarbose), glimepiride, pancrelipase, bisphosphonates
- Certain antiepileptic medications
- Nitrate products

TABLE 4:

Medication issues specific to COVID-19 and infection prevention

During the COVID-19 pandemic, consider the following in addition to standard recommendations for infection control during staff-resident contact (e.g., staff hand hygiene, use of personal protective equipment, social distancing)

Issue	Recommendation
Nebulizers can aerosolize viral particles, resulting in increased risk of transmission.	Transition from nebulizers to hand-held inhalers for residents needing inhaled therapy when feasible, safe, and available. Aggressiveness of implementing this recommendation should be informed by resident-centered clinical considerations and by facility-wide COVID-19 risk. MDIs with spacers and other hand-held inhalers **may b**e effectively used in many (although not all) residents with mild to moderate dementia. Be mindful of potential shortages in hand-held inhaler availability. Consult latest infection control guidance. See footnote for potential substitutions.*
Frequent, regular use of acetaminophen may mask fever.	For residents undergoing fever surveillance, consider temporarily replacing standing-dose acetaminophen with as-needed dosing. Monitor for pain control (e.g., using verbal and non-verbal cues) and use caution in residents unable to advocate for their needs.
Residents may transmit infections to nurses through direct contact during medication passes.	Observe resident hand hygiene prior to medication passes. If resident does not require direct help with medication delivery, place disposable containers containing medications and water cups for swallowing on bedside tables rather than handing directly to residents. Use verbal cueing.
Frequent monitoring and medication administration increases risk of infection transmission and may contribute to depletion of personal protective equipment.	Reduction or substitution of medications that require frequent monitoring, where such medications add little to no clinical value over alternatives. Reduction in frequency of vital sign monitoring specific to medications when the resident's clinical condition does not necessitate frequent monitoring.

* Science about medications that may treat or worsen COVID-19 and infection control guidance is rapidly evolving. Stay abreast of latest recommendations.
* For guidance on infection control with hand-helds see https://ismp.org/resources/revisiting-need-mdi-common-canister-protocols-during-covid-19-pandemic
* Potential transitions from nebulized medications ("Nebs") to hand-held inhalers shown below. With MDIs, use spacers where possible.

Albuterol Neb → Albuterol HFA (e.g., ProAir)	Levalbuterol Neb → Levalbuterol HFA	Ipratropium Neb → Ipratropium HFA
Albuterol/Ipratropium Neb (Duonebs) → Combivent	Arformoterol Neb (Brovana) → Salmeterol DPI (Serevent)	Formoterol Neb (Perforomist) → Salmeterol DPI (Serevent)

Regulatory Considerations

It is at the discretion of the PALTC team to use this implementation guide to optimize resident-centered medication management during the COVID-19 pandemic and beyond. Please note that this implementation guide is not intended to provide legal advice and its use is completely voluntary.

Optimizing the use of medications in an **evidence-based, person-centered care** approach is consistent with the recently enacted Quality Assurance Performance Improvement (QAPI) regulations (F865) and longstanding regulations related to unnecessary drugs (F757). Goals of the implementation guide include reduction of unnecessary drugs and aligning medication administration times, which can lead to a reduction in the potential for adverse events, drug interactions, resident burden, infection transmission risk, and time spent by nurses on medication pass.

Regarding consolidation of medication doses into appropriate schedules, provided that exact times are not included in and required for a medication order (i.e., give at 9 am and 5 pm), then by policy the PALTC facility can direct the administration schedule. Justification is provided by F759 (medication error rate) and F760 (significant medication errors), as noted: "*To determine the scheduled time, examine the facility's policy relative to dosing schedules. The facility's policy should dictate when it administers a.m. doses, or when it administers the first dose in a 4-times-a-day dosing schedule*."

Residents have the right to choose health care schedules consistent with their interests and preferences, and the nursing home should gather this information in order to be proactive in assisting residents to fulfill their choices. The adjustment of medication administration times to meet the individual needs and preferences of residents must be considered by the care team. However, medication administration scheduling must still consider the physician/NP/PA prescription, manufacturer's guidelines, and the types of medication, including time-critical medications. Some medications require administration within a narrow window of time to ensure resident safety or achieve a therapeutic effect while other medications are not affected by a more flexible schedule. Where appropriate, liberalizing the medication pass is clearly consistent with the cornerstone of the overriding principle of person-centered care. The guidance under F759/760 outlines a balanced approach, setting the expectation that the clinical team evaluates the appropriateness of each medication being considered for liberalized administration in the clinical setting of each individual resident.

Regulations referenced above can be found at:
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf

Communication Around Medication Changes

Good communication is essential when changing medications. Resistance from residents and prescribers is common and needs to be addressed carefully to achieve both short- and longer-term goals. Sample letters for prescribers and sample letters for residents and family or care partners are provided under the “Additional Resources” section and may be adapted to fit local circumstances. Such letters can be an important part of good communication but should be supplemented with other individual communication as needed.

Improving Communication Around Medication Changes
Explain changes and why they are being made
Understand and respond to concerns. Use reflection techniques to paraphrase what the person has said to you, to show you are listening and not just trying to make them hear you.
Be attentive to emotion. This may include fear of changes, perception of abandonment, worries about rationing of care, and perceived threats to authority or autonomy
Engage peer supporters
Partner with resident/family/caregiver and prescriber around changes; listen
In general, defer making changes if resident or prescriber opposed, unless urgent health considerations require immediate action.

It is important to explain to residents and their families and care partners the reason for any changes that are suggested, and to understand and address their concerns. Suggestions for medication discontinuation or changes in dose timing can induce cognitive conflict. For example, a resident might say or think “My doctor told me for years that I needed to take this medicine - and now you are telling me I should not take it?” Or, a family member might wonder “My mother’s doctor always told her she needed to take her statin at bedtime - and now they are telling her to take it in the morning. They don’t know what they’re doing!”

Explaining why things are different now can be helpful. For example, one might explain “I know you have been taking this medication a long time. But, your situation has changed and we now know that it’s not helpful to you.” Or, one might explain a timing change by saying “For a long time we thought that taking statins at bedtime was best. But we now know that they have pretty much the same effect when taken at other times of day.” One can also reassure residents that if they feel worse after

stopping a medication, the medication can be restarted. Discission of COVID-19 and how medication-related activities may affect their health and staff health may be useful.

Medication changes can induce strong emotions. People can feel that stopping medications means that their health care team doesn't care about them, is abandoning them, or is rationing their care to save money. Such concerns can be especially prominent among people who don't trust their health care team. People can also fear the unknown: "If I stop or change this medicine, maybe something bad will happen to me." Understanding and addressing these emotional responses is critical. If resistance to medication changes is suspected, it can be useful to ask about and elicit concerns. Peer encouragement and involvement of resident leaders or other peer advocates may also be helpful.

If residents or their families or care partners are skeptical or distrustful of change, it is typically better to wait until their concerns can be resolved before making changes, unless urgent health considerations dictate otherwise. As PALTC clinicians and leaders know well, building and maintaining trust and a positive relationship is important for good health and effective partnership in future health decisions.

Similar principles apply to prescribers, including the importance of trust and fear of potential harms that may occur after stopping or changing a medication. Prescribers may also feel protective about residents under their care and resent perceived challenges to their judgment or authority. Expressing appreciation and seeking their partnership in medication changes may be helpful to achieve their concurrence with desired changes. This partnership goes both ways; prescribers may identify issues unknown to staff that change the calculation about whether a medication change is advisable.

While these relationships are important, they do not supersede responsibility to the resident: if there are immediate dangers to resident health and safety it is appropriate to intervene first and resolve potential relational conflict later.

Avoiding unintended consequences

While the recommendations in this guide are intended to improve health and safety during the COVID-19 pandemic, there is always a danger of unintended consequences.

Potential Unintended Consequences	Mitigation Strategies
Long-term failure to restart useful medications that were temporarily discontinued, and for which long-term use remains indicated.	Keep a list of all medications that are discontinued and involve the consulting pharmacist in this process. Schedule a meeting time with your pharmacist, medical director, and director of nursing in 8 weeks to re-evaluate all medications on the discontinued list.
Return of symptoms and/or other markers of disease activity, which may result in worsening health and additional care needs.	For each discontinued medication, make note of potential symptoms to monitor. Assess for those symptoms, and document with COVID-19 symptom assessments.
Potential resident and care partner perceptions of abandonment and reduced quality of care.	Assure them of steps being taken to monitor and encourage them to let you know if they have concerns or are noticing any changes in symptom control. See section on “Communication Around Medication Changes” for additional suggestions.
Social isolation and fewer opportunities for evaluation as a result of less contact with staff.	In care planning meetings, assess and address impacts of changes in medication-related interactions with nursing staff, for example impacts on hydration, loneliness. Note that additional assessments to monitor for early symptoms of COVID-19 infection may balance out the decrease in time spent in distributing medications.
Increased costs if less expensive medications are replaced with more expensive medications.	Work with dispensing pharmacy to identify formulary/cost issues.
Potential legal or survey consequences if adverse outcomes are attributed to medication management changes.	Document your rationale for making the medication changes and the monitoring that you are doing to keep residents safe.

It may be wise to adapt or defer medication-related changes if potential harms are likely to exceed the benefits of these changes.

Additional Resources

- Dose conversions when transitioning from shorter- to longer-acting regimens or less frequent dosing
- External resources
- Draft Letter to Prescribers (on facility letterhead)
- Draft Letter to Residents and Care Partners (on facility letterhead)

Dose conversions when transitioning from shorter- to longer-acting regimens or less frequent dosing

Medication conversion	Immediate-release dose	Equivalent extended-release dose	
Acetaminophen (Tylenol) four times daily to less frequent dosing or conversion to acetaminophen extended release (Tylenol ER)	325 mg QID/q6h 500 mg QID/q6h 1000 mg QID/q6h	→ → →	Consider TID or BID dosing with IR or ER formulation, based on resident pain level
Metoprolol tartrate (twice daily) to metoprolol succinate (once daily)	25 mg BID 50 mg BID 100 mg BID	→ → →	50 mg daily (Succinate) 100 mg daily (Succinate) 200 mg daily (Succinate)
Carvedilol (twice daily) to carvedilol CR (once daily)	3.125 mg BID 6.25 mg BID 12.5 mg BID 25 mg BID	→ → → →	10 mg daily (ER) 20 mg daily (ER) 40 mg daily (ER) 80 mg daily (ER)
Metformin IR (twice daily) to metformin IR or ER (once daily)	500 mg BID 750 mg BID 1000 mg BID	→ → →	1000 mg (IR or ER)* daily 750 mg (ER), 2 tabs once daily 1000 mg (ER), 2 tabs once daily
Proton pump inhibitors twice daily to once daily	Full daily dose, e.g., omeprazole 20 mg bid	→	Halve total daily dose, e.g., omeprazole 20 mg daily

* For metformin, reasonable to give up to 1000 mg of immediate release (IR) formulation in a single dose. Gastrointestinal symptoms may limit the total dose that can be administered at one time. Be mindful of wide variability in pricing of Metformin extended release (ER) formulations.

* Long-acting medication formulations may be termed ER, CR, XL, or XR. We use the term ER (extended release) here to refer to all such formulations; no preference for a specific long-acting formulation is implied.

* References for conversions: LexiComp, deprescribing.org

External Resources

Type of material	Location
COVID-19 resource sites from: - American Geriatrics Society (AGS) - Society for Post-Acute and Long-Term Care (AMDA) - American Society of Consultant Pharmacists	https://www.americangeriatrics.org/covid19 https://paltc.org/covid-19 www.ascp.com/disaster
Evidence-based deprescribing guidelines - Proton pump inhibitors - Antihyperglycemics - Antipsychotics - Benzodiazepine receptor agonists - Cholinesterase inhibitors and memantine	https://deprescribing.org/resources/deprescribing-guidelines-algorithms/
Resident/patient handouts about deprescribing	https://www.deprescribingnetwork.ca/patient-handouts

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Draft Letter to Prescribers (on facility letterhead)

DATE

Dear (Prescriber/Clinician),

Thank you for being a critical member of our interprofessional team. As part of our efforts to address the COVID-19 pandemic, we have increased the frequency of our in-house monitoring of resident medication regimens. The purpose of this letter is to explain our recommended changes to your resident's medication regimen and solicit your support.

In light of the threats posed by the pandemic, we have focused our review on several areas. One is to reduce medications that may no longer be necessary and to align the times that medications are given as much as possible. This can reduce burden on residents and minimize non-essential close contact between residents and staff, thereby reducing risks of disease transmission. It also allows our nurses to spend more time on other essential activities that support resident well-being. In addition, certain medications pose special risks during this period of COVID-19. This includes medications that require additional administration times as well as large, chalky pills which frequently cause residents to cough or require close physical contact from staff to help swallow. Even when appropriate for long-term use, medicines that can safely be stopped for weeks or months may be appropriate to temporarily hold during this period of high COVID-19 threats.

Our overriding goal is to protect the health and well-being of our residents. We are thus making medication recommendations that we believe will promote our residents' health and safety in light of both their chronic conditions and threats posed by COVID-19. Our in-house team, with input from residents, direct care workers, and family members and care partners has identified the following residents with medication regimens that could be modified.

Name	Current Medication Regimen	Recommended Changes	Rationale	Comments (alternatives recommended by PCP)

Please contact Dr. X, Medical Director, at (email, phone) if you would like to discuss these changes. We would be glad to talk. If we do not hear back from you within [XX days/week(s)], we will make these changes.

Thank you very much for your care of residents in this community. We value your leadership and insights in promoting wellness, quality of care and quality of life.

Sincerely,

CMO
CNO
PharmD
Administrator

Draft Letter to Residents and Care Partners (on facility letterhead)

DATE

Dear (Resident and/or Care Partner),

During the COVID pandemic, we are working hard to ensure your safety. To reduce the potential for exposure to this disease, the clinical team is reviewing the way we currently provide medications across the facility. For some people, we may be able to change the times at which medications are administered. For others, we may reduce the number of medications when it is safe to do so. Residents may have their pulse or blood pressure checked less frequently when appropriate. We are carefully making individual decisions about each person with guidance from our full team.

Recently, our clinical team including nurses, pharmacists, and your primary care clinician reviewed your medical conditions and medications. We may be able to simplify your medications to reduce the risk of COVID-19 exposure, lessen side effects, and improve your overall health.

As we consider possible medication changes, we value each resident's input about their own care. Our goal is to focus on what matters to YOU, and to work together to achieve those goals. Your care team plans to discuss possible medication changes with you (and if you would like, with your family member or care partner). We believe that this opportunity will improve safety, quality of care, and quality of life for you and other residents in our community.

If you would like to speak with the medical director or director of nursing about this directly, please contact (names here with emails and telephone numbers).

Thank you for being a critical member of our team. We value your input and ideas.

Sincerely,

CMO
CNO
PharmD
Administrator

References

The following references provide evidentiary support and background information for recommendations included in the guide. References were identified through literature and bibliographic searches as well as suggestions by panel members. The searches were performed with a goal of identifying a limited set of high-value sources of evidence (e.g., systematic reviews, meta-analysis, high-quality randomized trials) relevant to the guide's recommendations.

Table / Topic	Reference
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* Relevant literature on several topics was limited so is not included in this table. Please also note that the quality of available evidence varies for different recommendations.

About this Implementation Guide

This implementation guide was developed by a task force convened by the Peter Lamy Center at the University of Maryland School of Pharmacy with assistance from the US Deprescribing Research Network. Content as well as resources were solicited from task force members as well as reviewed by outside experts and professional societies over a one week timeframe. Final approval of the guide was provided by general assent of task force members during the final conference call. Scientific literature was reviewed where possible but systematic review of relevant literature was not performed. Recommendations were thus derived mostly from expert opinion.

A note on terminology: In this guide we refer to people receiving care as "residents," reflecting common terminology in post-acute and long-term care settings. This is intended to be synonymous with the term "patients," which may be used in other settings. Similarly, we use the term "care partners" to refer to resident allies; this is generally synonymous with the term "caregivers." We also occasionally reference brand names. This is to aid use by clinicians and does not constitute endorsement of a specific brand-name formulation.

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