

Medications in Home and Community Based Care



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Learning Objectives

- Describe the role of occupational therapy and pharmacy in managing medications in home and community based care.
- Identify strategies used to improve medication use in the home.
- Apply information learned to patient case scenarios.

From a written prescription to the home...



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A prescription is written by prescribing provider.



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The prescription is filled at the pharmacy and picked up by the patient and/or caregiver. Patient education on the medication is provided by the pharmacist.



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The patient and/or caregiver takes the medication home for use in the home.

Medication Use in the Home and the 5M's

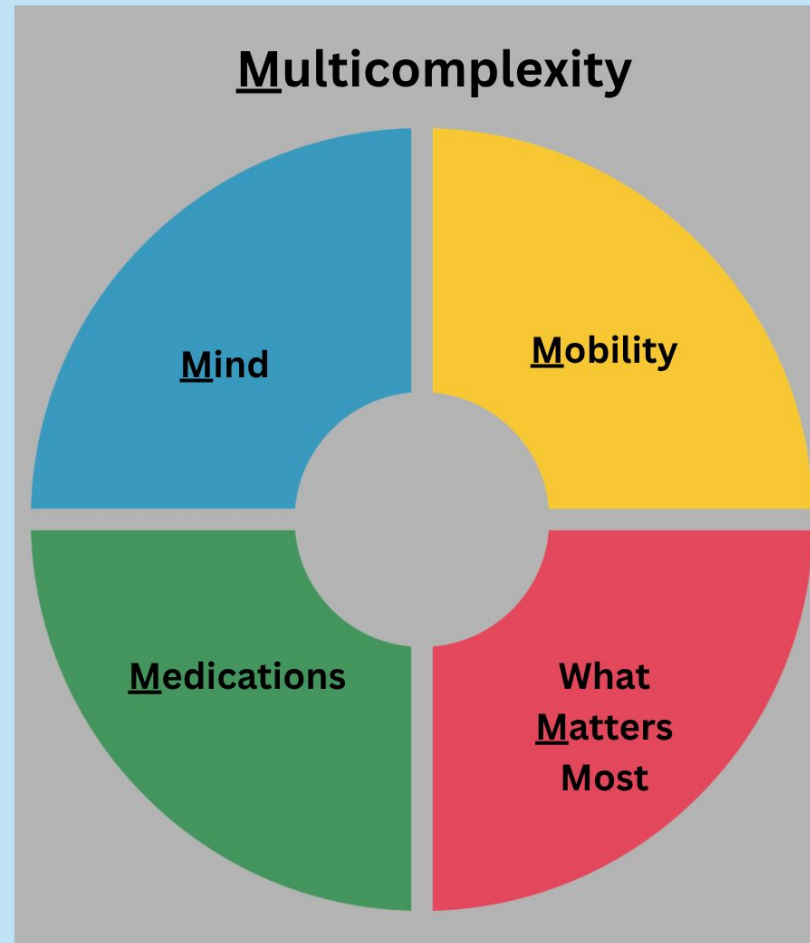


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We want to help patients age in their home as long as safely possible offering extra support in the home as needed.



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Pharmacists

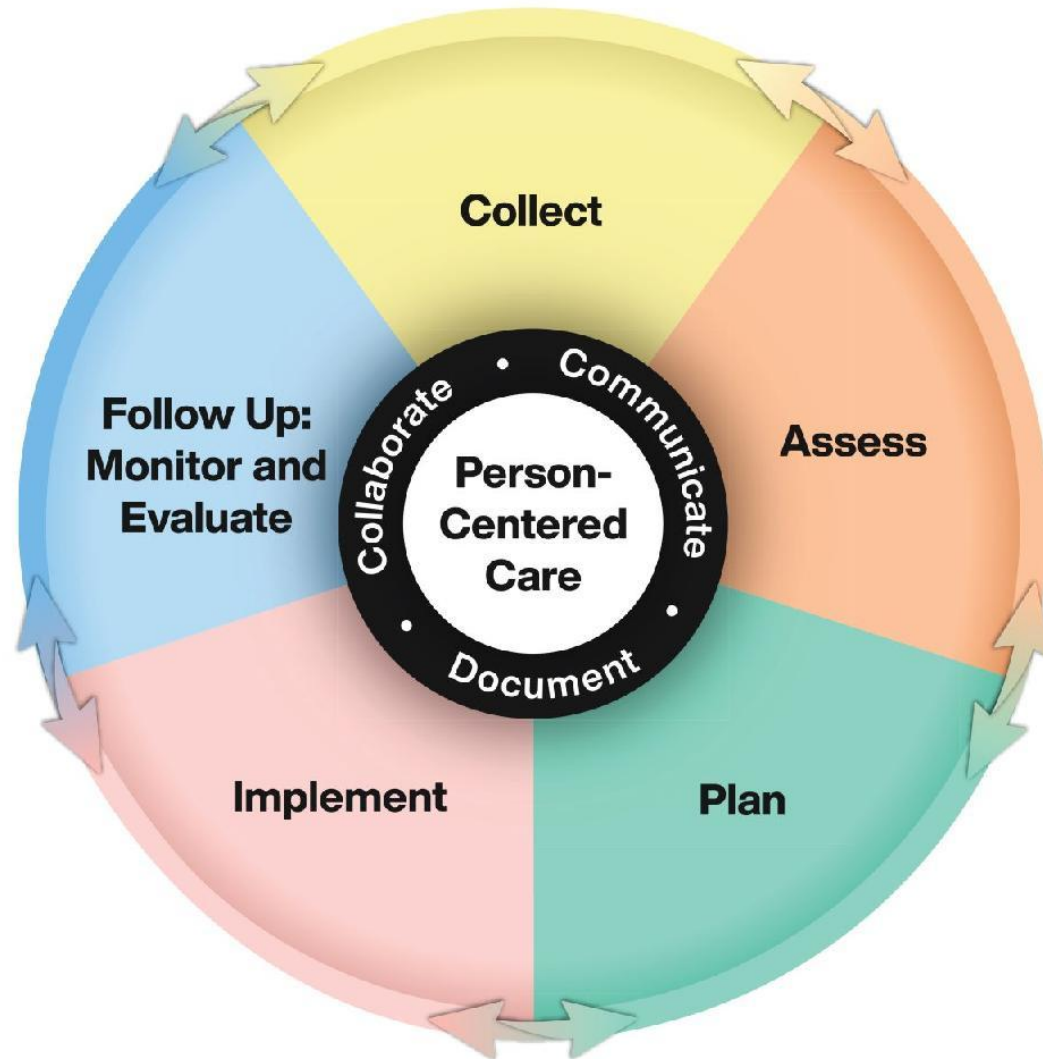
- Provide Medication Therapy Management (MTM) Services.
 - Comprehensive Medication Management (CMM)
 - Comprehensive Medication Review (CMR)
- Provide medication education and other applicable patient education/information to optimize patient care.
- Provide options for medication packaging, alternative therapies based on patient specific factors, and/or options for alternative medication formulations to support adherence.

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<https://nbmtm.org/mtm-reference/medication-therapy-management/>

Pharmacists' Patient Care Process



Pharmacists, as medication experts and integral members of the health care team, are essential health care providers who use a person-centered approach to optimize each patient's medication and health outcomes.

Guided by evidence, clinical reasoning, and complexity of patient needs, pharmacists apply the five steps of the Pharmacists' Patient Care Process to help patients meet their health goals.

Collect

The pharmacist ensures the collection of necessary subjective and objective information about the patient to understand the relevant medication and medical history, overall health status, and other pertinent factors. Information may be gathered and verified from multiple sources (e.g., the patient, caregiver, observations, existing patient records, and other health care professionals).

Assess

The pharmacist assesses the collected information to identify and prioritize patient needs to inform the establishment of a care plan.

Plan

The pharmacist develops a person-centered, evidence-based, cost-conscious care plan in partnership with the patient and/or caregiver, and in coordination with other care team members.

Implement

In providing person-centered care, the pharmacist implements a prioritized care plan in partnership with the patient and/or caregiver and in coordination with other care team members.

Follow Up: Monitor and Evaluate

The pharmacist follows up to monitor and evaluate the implementation of the care plan and the patient's overall health in collaboration with the patient, caregiver, and other care team members, as needed.

Occupational Therapy

- **Home Health Vs Outpatient in the Home**

- Medication management is a common reason for occupational therapy to see clients in the home. (Murphy, Somerville, Keglovits, Hu, & Stark, 2017)

- **Aging in Place Vs. Aging in the Right Place**

- Measuring person - environment fit during the medication management process is crucial in determining how a person's ability to manage medication is influenced by the barriers in the home environment. (Somerville et al., 2019)

- **Standard Operating Procedure as an Age Friendly Therapy Practice**

- Many medication management assessments exist
 - Majority are limited in their ability to identify the actual barriers to medication adherence (Somerville et al., 2019).

Home-Rx

- **Measures:**

- Severity of environmental barriers to medication management
- Determines the risk factors for medication mismanagement

- **Guides:**

- Interventions to improve medication management (Murphy, Somerville, Keglovits, Hu, & Stark, 2017).

- **Subscales**

- Capacity Subscale: potential ability to complete task if supports are in place.
- Safety Subscale: ability to safely complete the task
- Barriers Subscale: Identify environmental barriers to performance (Somerville et al., 2019)

Assistive Devices for Medication Use

Organizing tools: pill boxes with sections for each day; machines that pop out pills at the right time.

Special packaging: "blister packs" or pouches that show the day and time for each pill.

Reminder tools: alarms, cap timers, text messages, phone apps.

Tools for the senses: big-print labels, talking blood-sugar and blood-pressure machines for people who can't see well.

Assistive Devices for Medication Use

What Works BEST: Blister Packs - Special packaging that shows each dose by day and time.

- Study of almost 23,000 people found taking medicine correctly went up from 63% to 71%. (1)
- In one study, missed pills dropped from about 17 out of 100 down to under 4 out of 100. (2)

1. Conn, V. S., Ruppert, T. M., Chan, K. C., Dunbar-Jacob, J., Pepper, G. A., & De Geest, S. (2015). Packaging interventions to increase medication adherence: systematic review and meta-analysis. *Current medical research and opinion*, 31(1), 145–160. <https://doi.org/10.1185/03007995.2014.978939>

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Assistive Devices for Medication Use

What Works With Help: Electronic Monitors

- Devices that track when a pill bottle or pack is opened.
- They helped — but only when paired with a reminder or a person checking in.

Chan, A. H. Y., Foot, H., Pearce, C. J., Horne, R., Foster, J. M., & Harrison, J. (2022). Effect of electronic adherence monitoring on adherence and outcomes in chronic conditions: A systematic review and meta-analysis. *PloS one*, 17(3), e0265715. <https://doi.org/10.1371/journal.pone.0265715>

Assistive Devices for Medication Use

What Works So-So: Pill Boxes & Reminders

- Weekly pill boxes helped when part of a bigger plan.
- Text and phone reminders work best for people who are already forgetting doses.
- Phone apps and stand-alone dispensers: weak and mixed results.

Chan, A. H. Y., Foot, H., Pearce, C. J., Horne, R., Foster, J. M., & Harrison, J. (2022). Effect of electronic adherence monitoring on adherence and outcomes in chronic conditions: A systematic review and meta-analysis. *PloS one*, 17(3), e0265715. <https://doi.org/10.1371/journal.pone.0265715>

Cross AJ, Elliott RA, Petrie K, Kuruvilla L, George J. Interventions for improving medication-taking ability and adherence in older adults prescribed multiple medications. *Cochrane Database of Systematic Reviews* 2020, Issue 5. Art. No.: CD012419. DOI: 10.1002/14651858.CD012419.pub2. Accessed 19 August 2026.

Assistive Devices for Medication Use

What Did NOT Work

- A very large study of over 53,000 people tested cheap tools mailed to people: timer caps, toggle strips, and plain pill boxes.
- With no extra help, they did NOT improve how well people took their medicine.

Choudhry NK, Krumme AA, Ercole PM, et al. Effect of Reminder Devices on Medication Adherence: The REMIND Randomized Clinical Trial. JAMA Intern Med. 2017;177(5):624–631. doi:10.1001/jamainternmed.2016.9627

Medication Assistive Devices: A Tool, Not a Fix

Assistive devices help patients organize, remember, and manage their medications—but they work best when embedded in a coordinated care process, not used alone.

- **Pharmacist:** Configures the device, packaging, schedule, and refills
- **Occupational therapist:** Trains the patient and integrates the tool into daily routines

Pharmacists set it up. OTs make it stick.

Safe Disposal of Unused or Expired Medications

- Nationwide Take-Back Options: Take-Back Events, Take-Back Locations, Mail-Back Envelopes
- The Take Back program, North Dakota, ****FREE****
 - “North Dakota is the only state in the nation operating free, year-round, state-wide prescription drug disposal programs at local law enforcement agencies and pharmacies.”
 - Take Back program is for prescription and over the counter medications. The MedSafe program (containers at participating pharmacies) is for prescription products.
 - Find you location here: [Take Back Program Locations - North Dakota Attorney General](#)

An example from the
literature

Effect of Occupational Therapy in Promoting Medication Adherence in Primary Care: A Randomized Controlled Trial.

- Patient Population
 - Community Dwelling Adults with HTN, DM2, or both
- Treatment-as-Usual (TAU) Intervention
 - Participants met with the clinical pharmacist to learn about the diagnosis, diet, exercise, lifestyle factors, and medication adherence. The pharmacist adjusted medications as needed.
- IMedS Intervention
 - Participants met with the occupational therapist to discuss their medications and their habits, roles, and routines. The occupational therapist used motivational interviewing to enhance medication adherence and the number of visits was determined by the participant's level of participation.

Effect of Occupational Therapy in Promoting Medication Adherence in Primary Care: A Randomized Controlled Trial.

- **Findings:**

- Both arms improved adherence (ARMS-7, pill count) and disease control; no significant between-group difference; favorable post hoc OT effect sizes (ARMS-7 $dc=0.65$, pill count $d=0.55$)
- Feasibility demonstration that OT is deliverable and matches pharmacist-led care
 - Hypothesis-generating, not proof of superiority or of a combined effect

- **Limitations:** small/unbalanced sample, unequal contact time, self-report measures, uncontrolled HbA1c comparison

Dimension	Pharmacist Contribution	Occupational Therapist Contribution
Primary focus	Medication optimization, reconciliation, dose adjustment, deprescribing, and reducing medication errors	Integrating medication management into the person’s habits, roles, routines, and daily activities
Adherence strategies	Simplifying medication regimens, synchronizing refills, and providing behavioral counseling	Using environmental supports, self-monitoring, assistive technology, and cognitive or coordination adaptations
Limitations addressed	Drug interactions, polypharmacy, and clinical inertia	Functional barriers involving cognition, vision, dexterity, organization, and coordination

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Garrison, T. A., Schwartz, J. K., & Moore, E. S. (2023). Effect of Occupational Therapy in Promoting Medication Adherence in Primary Care: A Randomized Controlled Trial. The American journal of occupational therapy : official publication of the American Occupational Therapy Association, 77(3), 7703205040. <https://doi.org/10.5014/ajot.2023.050109>

Case Study: Parkinson's Disease and Dementia

- Caregiver placed pills in a glass bowl on the counter
- Alexa was used to provide medication reminders
- Client received care from multiple providers
- Neither the client nor the caregiver knew which medications should be taken—or when

Key concern: They had a reminder system, but no safe, accurate medication-management system.

Case Study: Stroke Transition to Independent Living

- Client was hospitalized following a stroke and discharged to an independent living facility
- Client was afraid to take the prescribed medications
- Client did not understand what the medications were for, why they were necessary, or when to take them
- Fear and lack of understanding led to medication refusal

Key concern: The medications were prescribed, but the client was not adequately prepared to manage them safely after discharge.

Case Study: Prescription Lost in the Care Transition

- Client with cognitive impairment attended a medical appointment while the caregiver remained in the waiting room
- A new medication was prescribed, but the client did not remember receiving the instructions
- The caregiver was not informed about the prescription
- At a later OT visit, the client and caregiver could not recall the treatment plan or access the online patient portal
- After multiple attempts to clarify the appointment information, the OT discovered that a new prescription had been ordered—but it had never been filled

Case Study: 27 Medication Bottles After Hospital Discharge

- Client was evaluated shortly after discharge from the hospital
- He reported that he did not know which medications to take or when to take them
- The OT discovered **27 medication bottles** in the home
- The client had experienced multiple emergency department visits and received new prescriptions after each visit
- It was unclear which medications were current, discontinued, duplicated, or potentially conflicting

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