Institute *for* Healthcare Improvement

Age-Friendly Health Systems:

Guide to Care of Older Adults in Nursing Homes

October 2022

ihi.org/AgeFriendly

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IHI is thankful to the Age-Friendly Health Systems faculty and advisory group. We extend our deepest gratitude to the Age-Friendly Health Systems founding co-chairs Ann Hendrich, PhD, RN, and Mary Tinetti, MD, and our co-chairs Don Berwick, MD, MPP, President Emeritus and Senior Fellow, Institute for Healthcare Improvement, Faith Mitchell, PhD, Fellow, Urban Institute, and Jonathan Perlin, MD, President and CEO, The Joint Commission.

Learn more at ihi.org/AgeFriendly.

To provide feedback on the Guide or other resources, ask questions, share progress, or learn more about **Age-Friendly Health Systems Care of Older Adults in Nursing Homes**, please email Alice Bonner (abonner@ihi.org) or AFHS@ihi.org.

Institute for Healthcare Improvement

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Introduction

This Age-Friendly Health Systems: **Guide to Care of Older Adults in Nursing Homes** is a companion document to the Age-Friendly Health Systems: **A Workbook for Nursing Home Teams**. The two documents are designed to be used together to help care teams prepare for, test, and implement a specific set of evidence-based or evidence-informed age-friendly care practices referred to as the 4Ms Framework.

Both the Guide and Workbook outline the 4Ms for nursing home care of older adults, including post-acute and long-term care settings (e.g., skilled nursing and rehabilitation facilities [SNFs] and nursing facilities [NFs]), hereafter referred to collectively as nursing homes).

- This Guide provides recommendations for how to implement a series of actions system-wide (throughout the nursing home or campus). It also provides recommendations for how to build the will for change and how to communicate about the 4Ms to all residents, care partners, and staff members to engage the entire community in promoting age-friendly care.

- The Workbook is designed to be practical and easy to use in daily practice, and includes printable worksheets that team members (including certified nursing assistants or CNAs) working directly with individual residents may use to deliver age-friendly (4Ms) care. The Workbook was developed with expert faculty and advisors, five pioneering health systems, ten nursing homes, and other partners.

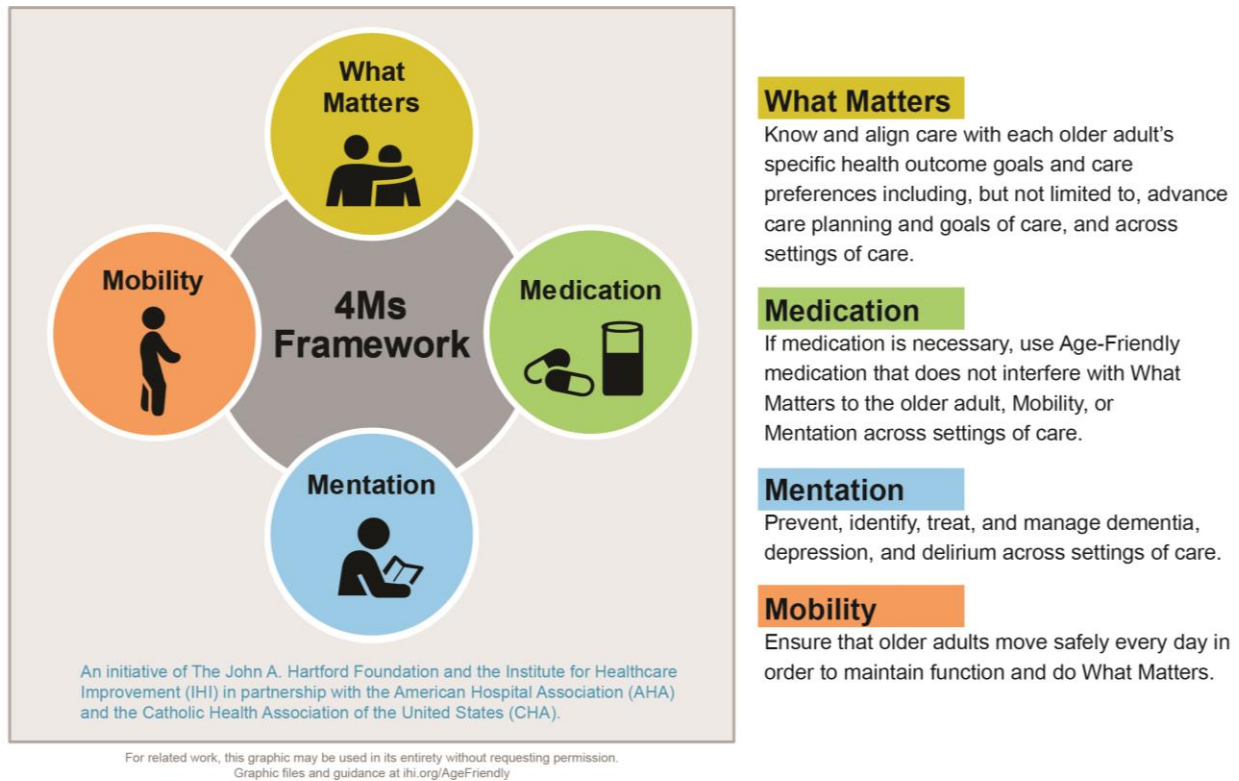# Age-Friendly Health Systems Overview

The United States population is aging. The number of older adults, individuals ages 65 years and older, is growing rapidly. As we age, care often becomes more complex. Health systems are frequently unprepared for this complexity, and older adults suffer a disproportionate amount of harm while receiving care in the health system.

To address these challenges, in 2017, The John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI), in partnership with the American Hospital Association (AHA) and the Catholic Health Association of the United States (CHA), set a bold vision to build a social movement so that all care with older adults is age-friendly care. **According to our definition, age-friendly care:**

- Follows an essential set of evidence-based practices;

- Causes no harm; and

- Aligns with What Matters to older adults and their care partners.

Becoming an Age-Friendly Health System entails reliably providing a set of four evidence-based elements of high-quality care, known as the "4Ms," to all older adults in your nursing home and across your health system. When implemented together, the 4Ms represent a broad shift by health systems to focus on the needs of older adults (see Figure 1).

Figure 1. 4Ms Framework of an Age-Friendly Health System

What Matters
Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, advance care planning and goals of 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.

An initiative of The John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI) in partnership with the American Hospital Association (AHA) and the Catholic Health Association of the United States (CHA).

For related work, this graphic may be used in its entirety without requesting permission.
Graphic files and guidance at ihi.org/AgeFriendly

The 4Ms — What Matters, Medication, Mentation, and Mobility — make complex care of older adults more manageable. The 4Ms identify core issues that should drive care and decision-making with older adults. The 4Ms organize care and focus on an older adult's wellness and strengths rather than solely on disease. The 4Ms are relevant regardless of an older adult's individual disease(s). They apply regardless of the number of functional problems an older adult may have, or that person's cultural, ethnic, or religious background.[1]

The 4Ms are a framework, not a program, to guide care of older adults wherever and whenever they come into contact with a health system's care and services. The intent is to incorporate the 4Ms into existing care, rather than layering them on top, in order to organize efficient delivery of effective care. This integration is achieved primarily through redeploying existing resources.
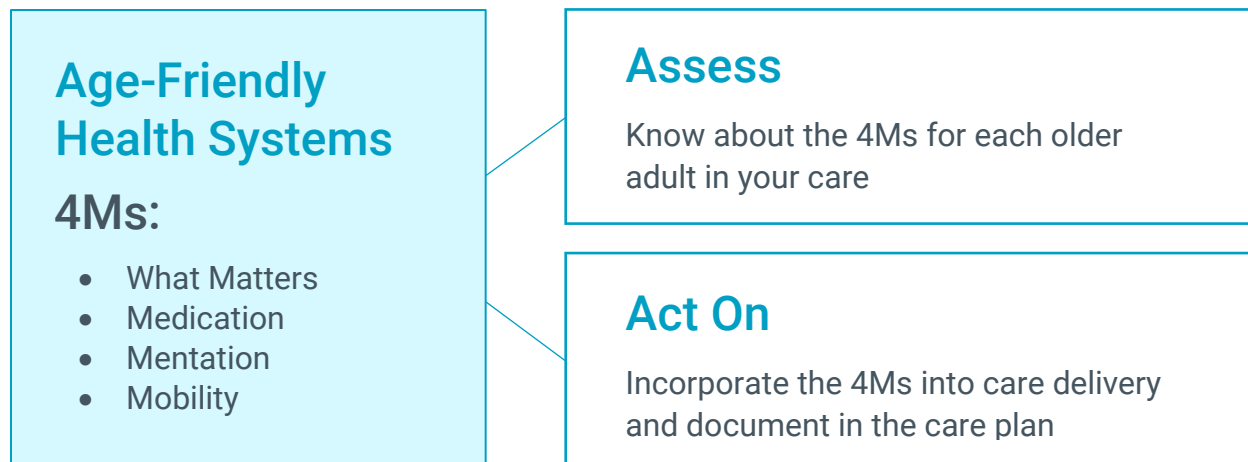
Many nursing homes have found that they already provide care aligned with one or more of the 4Ms for many older adults. New work involves organizing care so that all 4Ms, as a set of evidence-based practices, guide every encounter with an older adult and, when appropriate, their designated care partners.

4Ms Framework: Not a Program, But a Shift in Care

- The 4Ms Framework is not a program, but a shift in how we provide care to older adults.

- The 4Ms are implemented together (i.e., all 4Ms as a set of evidence-based elements of high-quality care for older adults).

- Your nursing home probably practices at least a few of the 4Ms in some places, at some times. Engage existing champions for each of the 4Ms. Build on what you already do and spread it consistently across your system.

- The 4Ms must be practiced reliably (i.e., for all older adults, in all settings and across settings, in every interaction).

There are two key drivers of age-friendly care (see Figure 2): knowing about the 4Ms for each older adult in your care ("assess"), and incorporating the 4Ms into care delivery and documentation in the care plan ("act on"). Both must be supported by documentation and communication across settings and disciplines.

Figure 2. Two Key Drivers of Age-Friendly Health Systems

Age-Friendly Health Systems

4Ms:
- What Matters
- Medication
- Mentation
- Mobility

Assess

Know about the 4Ms for each older adult in your care

Act On

Incorporate the 4Ms into care delivery and document in the care plan

Developed with our expert faculty and advisors, five pioneering health systems and eight nursing homes, this Age-Friendly Health Systems: Guide to Care of Older Adults in Nursing Homes is designed to help care teams test and implement a specific set of evidence-based, best practices that correspond to each of the 4Ms. This Guide outlines the 4Ms for residential post-acute and long-term care settings (e.g., skilled nursing and rehabilitation facilities and nursing facilities, hereafter referred to as nursing homes). For guidance specific to the care of older adults in hospitals and ambulatory practices, please reference the Guide to Using the 4Ms in the Care of Older Adults.[2]

Implementing the 4Ms in Nursing Home Settings

While there has been a shift from nursing homes and group homes to home- and community-based care over the past few decades, many older adults still spend some period of time in nursing homes. Nursing home care may be short term (a few days to a few weeks); sometimes this is called post-acute, sub-acute, or skilled nursing care and rehabilitation. In other cases, nursing home care may be longer term, lasting months or years.

Most nursing homes provide some 4Ms care some of the time to some residents. However, the set of 4Ms interventions is often not reliably or consistently delivered in all nursing homes.

> **The Age-Friendly Health Systems movement provides an integrated, evidence-based foundation from which to consistently deliver 4Ms care to all residents, all of the time.**

Because many residents consider a nursing home to be their home, comprehensive, integrated care is critical to achieving the resident's goals and positive health outcomes. Multiple team members visit residents and staff (e.g., pharmacy consultant, therapists, nutrition consultants, psychiatric consultants, medical team members) at different times. Therefore, it is critical that each nursing home have 4Ms practices and protocols written out, so that all team members are oriented to optimal and accepted visit and communication practices across settings.

Equity and diversity are critical issues across all health care settings, including nursing homes. Studies have demonstrated differences in quality in nursing homes with a higher percentage of minority residents and/or a higher percentage of Medicaid residents versus nursing homes with a higher percentage of white and/or private pay residents.[3,4] Capturing quality data stratified by race, ethnicity, sexual orientation, gender identity, and other characteristics will help identify opportunities to provide care equitably across all populations. Diversity and equity are vital for staff as well.[5,6]

As described in the introduction, this Guide references or includes tools, worksheets, and appendices. Teams may choose to instead use similar tools and worksheets that are part of Age-Friendly Health Systems: A Workbook for Nursing Home Teams. **Whether your team chooses to use the tools in the Guide or in the Workbook, it is not necessary to complete both sets of documents for each topic.**

Putting the 4Ms into Practice

Below are five steps for integrating the 4Ms into standard nursing home care:

Step 1. Assemble and Prepare the Team; Begin to Outline an Approach

Step 2. Review, Discuss, and Understand Current 4Ms Goals, Practices, and Workflows on the Unit (4Ms Care Descriptions); Design or Adapt Workflows
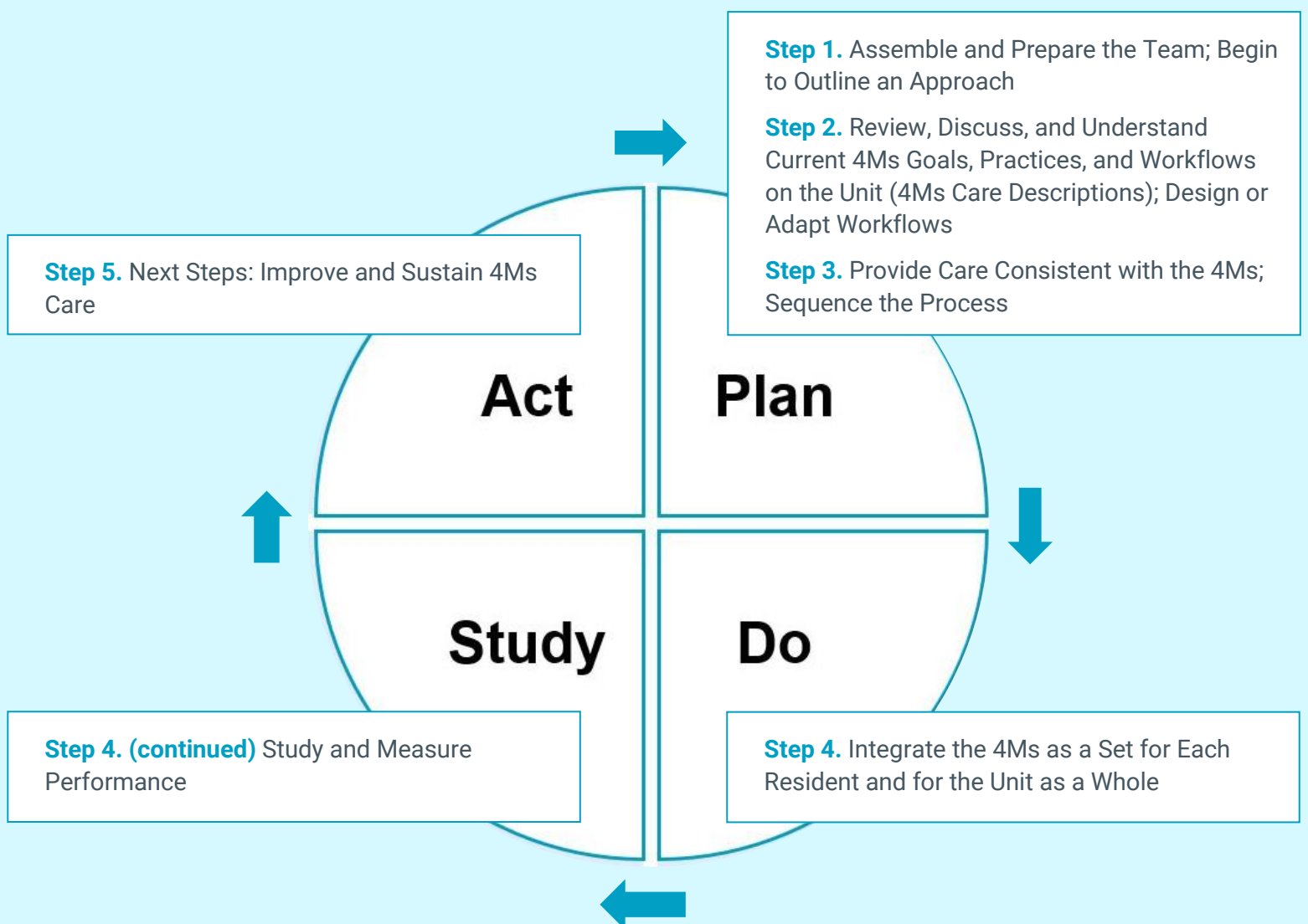
Step 3. Provide Care Consistent with the 4Ms; Sequence the Process: Start with One Resident and One "M," Then Test Remaining Three "Ms"

Step 4. Integrate the 4Ms as a Set for Each Resident and for the Unit as a Whole; Study and Measure Performance

Step 5. Next Steps: Improve and Sustain 4Ms Care

While we present the five steps as a sequence, in practice you can approach Steps 2 through 5 as a loop aligned with Plan-Do-Study-Act (PDSA) cycles[7] (see Figure 3).

Figure 3. Integrating the 4Ms into Care Using PDSA Cycles

Step 1. Assemble and Prepare the Team; Begin to Outline an Approach

Step 2. Review, Discuss, and Understand Current 4Ms Goals, Practices, and Workflows on the Unit (4Ms Care Descriptions); Design or Adapt Workflows

Step 3. Provide Care Consistent with the 4Ms; Sequence the Process

Step 5. Next Steps: Improve and Sustain 4Ms Care

Step 4. (continued) Study and Measure Performance

Step 4. Integrate the 4Ms as a Set for Each Resident and for the Unit as a Whole

Step 1. Assemble and Prepare the Team; Begin to Outline an Approach

The aim of an Age-Friendly Health System is to reliably apply the two key drivers of age-friendly care with all older adults: knowing about the 4Ms for each older adult in your care ("assess"), and incorporating the 4Ms into care delivery and documenting in the care plan ("act on"). With an understanding of your current experience and capacity to engage in 4Ms care, you can build on that good work until the 4Ms are reliably practiced with all older adults.

The following steps help you prepare to become an Age-Friendly Health System by understanding your current state — know older adults in your nursing home, and identify the 4Ms or other relevant clinical practices in your nursing home — and then establishing a team to begin testing changes to practices and workflows to align with age-friendly (4Ms) care.

Know Older Adults in Your Nursing Home

Estimate the number of adults you served in each age group in the last month (see Table 1).

Table 1. Adults Served in the Last Month (by Age Group)

Age Group	Number of Residents	Percent of Total Residents
18–64 years		
Older Adults:		
65–74 years		
75–84 years		
85+ years		
Total Number of Adults		100%

If possible, for each older adult resident specify: primary or preferred language, race, ethnicity, sexual orientation, gender identity, cultural and religious preferences (see Table 2), and health literacy levels (see Table 3).

Table 2. Older Adults' Language, Race, Ethnicity, Cultural and Religious Preferences

Primary or Preferred Language	Percent of Total Older Adults
Race	Percent of Total Older Adults
Sexual Orientation/Gender Identity	Percent of Total Older Adults
Ethnicity	Percent of Total Older Adults
Cultural Preferences	Percent of Total Older Adults
Religious Preferences	Percent of Total Older Adults

Table 3. Health Literacy Levels of Older Adults*

Health Literacy Level	Estimated Percent of Total Older Adults
Low	
Moderate	
High	

*The team may also want to ask about learning preferences, such as how a resident prefers to receive information (e.g., verbally, reading, watching on TV, social media).

Identify the 4Ms in Practice in Your Nursing Home

To identify where the 4Ms are in practice in your nursing home, walk through activities as if you were an older adult or care partner. In a nursing home setting, that may include preparing for a visit from a primary care provider (MD/NP/PA), observing a visit, and understanding who takes responsibility for each of the 4Ms across the care team. Go through the admission process when an older adult arrives at the nursing home, spend time on a unit, and sit quietly in the hall of a unit. Look for the 4Ms in action. Observe the workflow and look for gaps or duplication of efforts. Find bright spots, opportunities, and champions of each of the 4Ms in your nursing home.

Use the checklist in Appendix A to note what you learn.

Select a Unit* in Your Nursing Home to Begin Testing

(*You may call these units, floors, neighborhoods, communities, or other terms.)

Once you identify where the 4Ms are currently in practice in your nursing home, select a specific unit in which to begin testing age-friendly interventions. Some questions to consider when selecting a unit or floor for testing:

- Is there a unit where a large number of older adults receive care? (Most nursing homes have a high percentage of older adults, with an average age of about 86 years old.)

- Is there will on the unit to become age-friendly and improve care for older adults? Is there a champion?

- Is the unit relatively stable (i.e., not undergoing major changes or experiencing high turnover of staff or leadership)?

- Does the unit have access to data? (See the *Study and Measure Performance* section below for more on measurement.) Data is useful and specific measures may be selected to address the needs of nursing home residents.

- Can one unit in the nursing home be a model for the rest of the nursing home or for other nursing homes? (Modeling is not necessary, but useful to scale-up efforts across nursing homes regionally or nationally.)

- Is there a unit where your team members have experience with the 4Ms, either individually or collectively? Do they already have some processes, tools, and/or resources to support the 4Ms?

Assemble and Prepare a Team

Based on our experience, teams that include certain roles and/or functions are most likely to succeed (see Table 4). As you establish your team to begin testing age-friendly interventions, consider the following questions:

- Does the team represent a diversity of perspectives? Consider all the different roles within the nursing home that may be involved in practicing the 4Ms with older adults. Additionally, is the team representative of the race, ethnicity, culture, and language diversity of the resident population?

- How do power dynamics affect the team? How might you ensure that all team members are able to actively participate in identifying and testing change ideas? Can you protect time for all team members to participate in the improvement process, including through cross-coverage for resident care?

Table 4. Team Member Roles

Team Member	Description
An Older Adult (Resident) and Care Partner (Residents and care partners may only attend calls or meetings related to their own care/care planning, not those of other residents)	Older adults and their families or care partners bring critical expertise to any improvement team. They have a different experience with the nursing home than providers and can often identify key issues. We highly recommend that each team has at least one older adult or family member/care partner (ideally more than one), or a way to elicit feedback directly from those individuals (e.g., through a Resident and/or Family Advisory Council). Additional information about appropriately engaging older adults and care partners in improvement efforts can be found on the Institute for Patient- and Family-Centered Care website and Valuing Lived Experience: Why Science Is Not Enough.[8]
Leader/Sponsor	This person champions, authorizes, and supports team activities, as well as engages senior leaders and other groups within the nursing home to remove barriers and support implementation and scale-up efforts. Although they may not do the "on-the-ground" work, the leader/sponsor is responsible for: • Building a case for change that is based on strategic priorities and the calculated return on investment; • Encouraging the improvement team to set goals at an appropriate level; • Providing the team with needed resources, including staff time and operating funds; • Ensuring that improvement capability and other technical resources, especially those related to information technology (IT) and electronic health records (EHRs), are available to the team; and • Developing a plan to scale up successful changes from the improvement team to the rest of the organization.
Administrative Partner or Champion	This person represents the disciplines involved in the 4Ms and works effectively with clinicians, other technical experts, and leaders within the organization. We recommend that this role is fulfilled by the manager of the unit where changes are being tested because that individual can likely move nimbly to take necessary action, make recommended changes in that unit, and is invested in sustaining changes that result in improvement.
Interprofessionals, including Clinicians and Others Representing Disciplines Involved in the 4Ms	These individuals may include a physician, nurse practitioner, nurse, certified nursing assistant (CNA), recreational therapist, physical, occupational, or speech therapist, social worker, care manager, pharmacist, chaplain, dietary professional, environmental services worker, and/or others who represent the 4Ms in your context. We strongly encourage interprofessional representation on your team and urge you to enlist more than one clinical champion. These champions should have or be able to develop good working relationships with colleagues and be interested in driving change to achieve an Age-Friendly Health System. Consider professionals who are opinion leaders in the organization, who others seek for guidance, who are close to the point of care, and who are not afraid to test and implement changes.
Others	• Improvement coach • Data analyst/EHR analyst/MDS Coordinator/Nurse Assessment Coordinator • Finance representative

Step 2. Review, Discuss, and Understand Current 4Ms Goals, Practices, and Workflows on the Unit (4Ms Care Descriptions); Design or Adapt Workflows

Using the 4Ms Age-Friendly Care Description Worksheet (see Appendix B), describe what it means to provide care consistent with the 4Ms. This worksheet enables team members to integrate age-friendly best practices to assess, document, and act on the 4Ms together while also customizing those practices for your nursing home. To be considered an Age-Friendly Health System, your nursing home engages or assesses older adults for all 4Ms, documents 4Ms information, and acts on the 4Ms accordingly.

Questions to consider:

- How does the current state of your nursing home's practices compare to the actions outlined in the 4Ms Age-Friendly Care Description Worksheet?

- Which of the 4Ms do you already incorporate? How reliably are they practiced?

  For example: Do you already ask and document What Matters, review for high-risk Medication use, screen for delirium, dementia, and depression (Mentation), and screen for Mobility for each older adult? If so, with what frequency and where are results documented and shared? Are there written policies and standards for these activities?

- Where are there gaps in 4Ms? What ideas does the team have to prioritize and fill the gaps? How can each team member role contribute to one or more of the 4Ms (e.g., administrator, medical director, physician, nurse, CNA, social worker, recreational therapist, nutritionist, environmental services, physical/occupational/speech therapist, chaplain)?

> In this step, use the 4Ms Age-Friendly Care Description Worksheet (see Appendix B) to describe 4Ms care for the older adults you support.

Set an Aim

Given the current state of your nursing home's practices to care for older adults, set an aim for this initial effort to begin testing 4Ms age-friendly care. An aim articulates what you are trying to accomplish — what, how much, by when, for whom. It serves as the focus for your team's work and enables you to measure your progress. Below is an aim statement template that requires you to think about the reach of 4Ms in the next six months.

> ### Aim Statement Template
>
> By [DATE], [NAME OF NURSING HOME] will articulate how it operationalizes 4Ms care and will have provided that 4Ms care to residents across [NUMBER] out of [NUMBER] units.

Design or Adapt Workflows

There are many ways to improve care for older adults. However, there is a set of key actions, summarized below, that touch on all 4Ms and dramatically improves care when implemented together (see Table 5).

> In Appendix C you will find a list of those key actions and ways to get started with each one in your nursing home, as well as additional tips and resources.

You may have many key actions already in place. You can sustain, improve, and expand them where necessary. You may still need to test and implement other ideas. The key is to ensure that these practices are consistent and reliable — occurring every time in every setting for every older adult and, when appropriate, their care partners.

Table 5. Age-Friendly Health Systems Summary of 4Ms Key Actions for Nursing Homes

Assess	Act On
Know about the 4Ms for each older adult in your care	**Incorporate the 4Ms into care delivery and document in the care plan**
Key Actions (to occur regularly or with change in condition):	
- Ask the older adult What Matters to them, including their health outcome goals and care preferences - Document What Matters and ensure that all team members have access to response - Review for high-risk medication use, polypharmacy, adverse drug events, adequate monitoring - Screen for delirium on admission; at least every 24 hours and with change in condition in SNF; with change in condition or as needed in long-term care - Screen for dementia - Screen for depression - Screen for mobility	- Align the care plan with What Matters - Deprescribe or do not prescribe high-risk medications and optimize all other medications - Ensure sufficient oral hydration - Orient older adults to time, place, and situation if/when appropriate - Ensure that older adults have their personal adaptive equipment - Prevent sleep interruptions; use non-pharmacological interventions to support sleep - Manage behaviors related to dementia; consider further evaluation and/or referrals - Identify and manage factors contributing to depression; consider further evaluation and/or referrals - Promote early, frequent, and safe mobility

Supporting Actions:

- Use the 4Ms to organize care and focus on the older adult, wellness, and strengths rather than solely on disease or reduced function.

- Integrate the 4Ms into care and existing workflows.

- Identify which activities you can stop doing to reallocate resources for the 4Ms.

- Document all 4Ms and consider grouping the 4Ms together in the clinical record and care plan.

- If your nursing home is part of a health system, make the 4Ms visible across care teams and settings, including hospitals, primary care practices, home health, and others.

- Form an interprofessional care team that reviews the 4Ms in regular huddles and/or rounds (or add this to an existing interprofessional team).

- Educate older adults, care partners, all team members, and the community about the 4Ms.

- Align the 4Ms to community resources and supports as well as public health initiatives to achieve improved health outcomes across all settings.

Include the key actions above and description of age-friendly care in workflows. You may start with a high-level workflow like the example shown in Figure 4.

Figure 4. Age-Friendly Care Workflow Example for Nursing Home: Core Functions
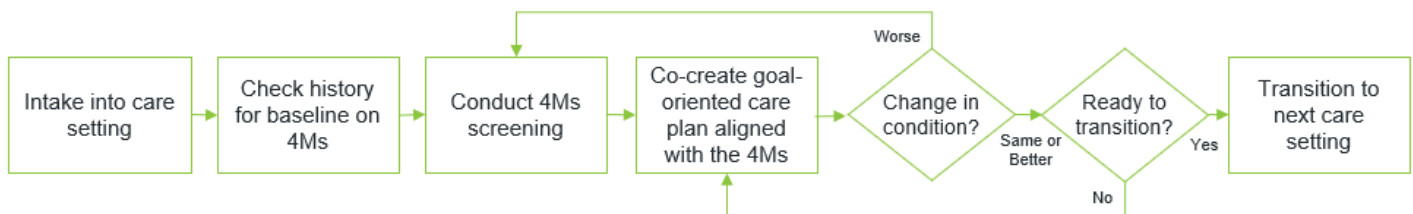
Outline what you still need to learn and identify the specific 4Ms key actions you will test (e.g., use the Timed "Up & Go" (TUG) Test or other evidence-based tool to evaluate mobility and fall risk, use a standardized checklist to identify high-risk medications).

Step 3. Provide Care Consistent with the 4Ms; Sequence the Process: Start with One Resident and One "M," Then Test Remaining Three "Ms"

Your team will continue to learn as you move toward implementing workflows to provide reliable 4Ms care. Begin to test the 4Ms key actions with one older adult and, if appropriate, their care partners as soon as you have notes for Step 2 and Step 3. Do not wait to have your forms or EHR screens finalized before you begin to test with one older adult. Use the Plan-Do-Study-Act (PDSA) Worksheet to plan your tests and learn more from them. Then, consider how to scale up your tests to more older adults. For example:

- Apply your draft standard process and workflow first with one older adult. Can your team follow the steps? If not, why not?

- If necessary, modify the steps. Then, apply it with five older adults. What lessons do you learn from applying 4Ms care with these older adults? What impact does learning about all 4Ms have on care plans?

- If necessary, modify the steps. Then, apply with ~25 older adults or a similar-sized unit or wing and keep going. Are you getting close to being able to use the process for every older adult on one or more units? Are you getting positive results?

> An example of a PDSA cycle that may help with testing and workflow can be found in Appendix D, along with a blank template.

Step 4. Integrate the 4Ms as a Set for Each Resident and for the Unit as a Whole; Study and Measure Performance

How reliable is your 4Ms care? What impact does 4Ms care have on clinical or other outcomes? Below basic approaches to measure and study performance are described.

Observe and Seek to Understand

Observe: Start with direct observation of your draft 4Ms Age-Friendly Care Description in action.

- Can your team follow the 4Ms Age-Friendly Care Description and successfully assess and act on the 4Ms with the older adults in your care?

- Do care plans reflect person-directed goal setting and 4Ms care?

Suggested timeline: In the first month, directly observe 4Ms care for at least one older adult each week. Then, for the next six months, observe 4Ms care for at least five older adults each month.

Ask the Team: At least once per month for several months during the testing period, ask the team two open-ended questions and reflect on the answers:

- What are we doing well to assess, act on, and document the 4Ms?

- What do we need to change to translate the 4Ms into more effective care?

Plan with the team how and when you will continue to use open-ended questions to reflect together on an ongoing basis.

Ask Older Adults and Care Partners: At least once in the first month during the testing period, ask one older adult and care partner two open-ended questions and reflect on the answers:

- What went well in your care today?

- What could we do better to understand what age-friendly care means to you?

Next, in the second month of testing, ask five additional older adults the same questions. Plan with the team how and when you will continue to talk with older adults using open-ended questions on an ongoing basis. State where you will document the feedback received during these conversations.

Measure How Many Older Adults Receive 4Ms Care

There are three options to start measuring older adult encounters that include 4Ms care. We recommend starting with Option 1 because it directs close attention to the 4Ms work and it is easier to collect the data than Option 2 (conducting retrospective chart reviews) and Option 3 (building a specific EHR report).

Option 1: Real-Time Observation (Recommended)

Use real-time observation and staff reporting of the work to tally your 4Ms counts on a whiteboard or on paper. An example might look like the chart in Figure 6.

Figure 6. Example of Real-Time Observation in Nursing Homes

Date	4Ms Care according to our site description						
	All 4Ms	**What Matters**	**Medications**	**Dementia**	**Depression**	**Delirium**	**Mobility**
Pt ID	if N, check details						
101	Y N	Y N	Y N	Y N	Y N	Y N	Y N
102	Y N	Y N	Y N	Y N	Y N	Y N	Y N
103	Y N	Y N	Y N	Y N	Y N	Y N	Y N
104	Y N	Y N	Y N	Y N	Y N	Y N	Y N
105	Y N	Y N	Y N	Y N	Y N	Y N	Y N
106	Y N	Y N	Y N	Y N	Y N	Y N	Y N
107	Y N	Y N	Y N	Y N	Y N	Y N	Y N
108	Y N	Y N	Y N	Y N	Y N	Y N	Y N
109	Y N	Y N	Y N	Y N	Y N	Y N	Y N
110	Y N	Y N	Y N	Y N	Y N	Y N	Y N
111	Y N	Y N	Y N	Y N	Y N	Y N	Y N
112	Y N	Y N	Y N	Y N	Y N	Y N	Y N
113	Y N	Y N	Y N	Y N	Y N	Y N	Y N
114	Y N	Y N	Y N	Y N	Y N	Y N	Y N
115	Y N	Y N	Y N	Y N	Y N	Y N	Y N

Option 2: Chart Review

If real-time observation is not feasible, consider a sampling strategy using chart review. Using a tally sheet like the example discussed in Option 1, review charts for evidence of 4Ms care. At the start of your work to test the 4Ms in your nursing home:

- Review charts of older adults eligible for 4Ms care (i.e., those with whom you have tested or intended to provide 4Ms care) in a particular time period to confirm proper documentation of 4Ms care. To estimate the number of older adults receiving 4Ms care in that particular time period (e.g., monthly), randomly sample 20 charts. If fewer than 20 residents, complete chart review for all residents for whom you intended to provide 4Ms care. Note: Care plan meetings during the time period may be a good opportunity to identify your sample.

- In the 20 sample charts, observe how many older adults received your described 4Ms care (noted as "C" in the calculation below).

- Calculate the approximate number of older adults receiving 4Ms care in the time period as follows:

> Estimated number of older adults receiving 4Ms care =
>
> (C ÷ 20) x Total number of older adults eligible for 4Ms care

Option 3: EHR Report

If you have an EHR, you may be able to run EHR reports, especially on assessment of the 4Ms, to estimate the number of older adults receiving 4Ms care in a particular time period. It may take a lot of effort to create a suitable report, so we do not recommend this option as your first choice.

However, for ongoing process control, some organizations may wish to develop reports that show 4Ms performance; you may be able to request report development from your IT services while starting with Option 1 or 2.

Routine Counting of Older Adults Receiving 4Ms Care

Once your site provides 4Ms care with high reliability (see Appendix E), then the estimate of the number of older adults receiving 4Ms care becomes easier: report the volume of eligible older adults receiving 4Ms care from your site during the measurement period.

> See Appendix E for guidance on implementing reliable 4Ms age-friendly care.

Table 6 below provides additional guidance for counting the number of older adults receiving 4Ms age-friendly care.

Table 6. Additional Measurement Guidance and Recommendations

4Ms Measurement Guidance for Nursing Homes	
Measure Name	Number of older adults who receive 4Ms age-friendly care
Measure Description	Number of older adults who receive 4Ms care as described by the nursing home
Site	Nursing home
Population Measured	Adults ages 65+ (or similar age range, depending on sub-populations)
Measurement Period	Monthly or as needed
Count	Inclusion: Older adults with LOS>=1 day present on the unit between 12:01 AM on the first day of the measurement period and 11:59 PM on the last day of the measurement period who receive the unit's description of 4Ms care
Measure Notes	The measure may be applied to units within a nursing home as well as the entire health system. See the 4Ms Age-Friendly Care Description Worksheet to describe 4Ms care for your unit. To be considered 4Ms age-friendly care, you must engage or screen all older adults for all 4Ms, document the results, and act on them as appropriate. If a total count is not possible, you can sample (e.g., audit 20 charts) and estimate: (Total number of older adults receiving 4Ms care ÷ 20) x (Total number of older adults cared for in the measurement period). If you are sampling, please note that when sharing data. Once you have established 4Ms care as the standard of care on your unit, validated by regular observation and process review, you can estimate the number of older adults receiving 4Ms care as the number of older adults cared for by the unit. You do not need to filter the number of older adults by unique health record number.

See Appendix F for additional recommendations on measuring the impact of 4Ms care.

Step 5. Next Steps: Improve and Sustain 4Ms Care

Reminder: Integrating the 4Ms as a Cycle

While we present the steps as a sequence, in practice Steps 2 through 5 are a cycle aligned with the Plan-Do-Study-Act (PDSA) method (see Figure 3 above). As you establish your 4Ms age-friendly care, you may cycle through these steps many times over the course of several months in order to achieve reliability and then turn your efforts to sustainability and monitoring (quality control) over time. See Appendix D for an example PDSA cycle and blank template.

For more information about how to sustain 4Ms care, please see the IHI White Paper, *Sustaining Improvement*.[9]

Appendix A: Process Walk-Through: Know the 4Ms in Your Nursing Home and Health System

There are two key drivers to age-friendly care: knowing about the 4Ms for each older adult in your care ("assess") and incorporating the 4Ms into the plan of care and actual care delivery ("act on"). An Age-Friendly Health System aims to reliably assess and act on all of the 4Ms with all older adults. The initial objective is to understand where 4Ms care is currently happening and build on that work so that all 4Ms occur reliably for all older adults in the nursing home and across settings.

How do you already assess and act on each of the 4Ms in your setting?

One way to find out is to spend time on your unit or your nursing home observing care. Here are some guiding questions:

- What are current activities and services related to each of the 4Ms? What processes, tools, and resources to support the 4Ms do we already have in place here or elsewhere in the nursing home? How are hospital and home health partners engaged in promoting the 4Ms across settings?

- Where is the prompt or documentation for 4Ms available in the written records, EHR, care plan, or elsewhere for all clinicians and care team members? Is there a place to see the 4Ms (individually or together) that is easily accessible to all team members? Across settings?

- What experience do your team members have with the 4Ms? What assets do you already have on the team? What challenges have they faced? How have they overcome them?

- What internal or community-based resources do you commonly refer to and for which of the 4Ms? For which of the 4Ms do you need additional internal and/or community-based resources? Public health resources?

- Do your current 4Ms activities and services appear to be having a positive impact on older adults and/or care partners? Do you have a way to hear about and document older adults' experiences?

- Do your current 4Ms activities and services appear to be having a positive impact on clinicians and staff?

- What works well?

- What could be improved?

4Ms in Nursing Homes	Specifically, Look for How Do We…	Current Practices and Observations
What Matters Know and align care with each older adult's specific health outcome goals and care preferences, including all stages of life and across settings of care	• Ask each older adult What Matters most, document it, and share What Matters across the care team • Align the care plan with What Matters most to the older adult	• List current tools, assessment forms, checklists, curriculae in current use • Describe how the use of these tools is monitored/measured by leaders • Describe current staff training
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	• Review for high-risk medication use and document • Deprescribe or avoid high-risk medications, and document and communicate changes • Assess for polypharmacy, drug-drug or drug-food interactions, failure to monitor therapeutic or adverse effects • Monitor for potential adverse drug events • Educate residents, care partners, team members	• List current tools, assessment forms, checklists, curriculae in current use • Describe how the use of these tools is monitored/measured by leaders • Describe current staff training
Mentation — Dementia Prevent, identify, treat, and manage dementia across settings of care	• Screen for dementia/cognitive impairment and document the results • Address behavioral and other manifestations of dementia; educate older adults and care partners; consider further evaluation and/or referrals as needed	• List current tools, assessment forms, checklists, curriculae in current use • Describe how the use of these tools is monitored/measured by leaders • Describe current staff training
Mentation — Depression Prevent, identify, treat, and manage depression across settings of care	• Screen for depression and document the results • Identify and manage factors contributing to depression, refer for further evaluation as indicated	• List current tools, assessment forms, checklists, curriculae in current use • Describe how the use of these tools is monitored/measured by leaders • Describe current staff training

4Ms in Nursing Homes	Specifically, Look for How Do We…	Current Practices and Observations
Mentation — Delirium Prevent, identify, treat, and manage delirium across settings of care	• Screen for delirium on admission and at least every 24 hours in SNF and with change in condition or as needed in LTC and document the results • Ensure sufficient oral hydration • Orient to time, place, and situation if/when appropriate • Ensure older adults have their personal adaptive equipment (glasses, hearing aids, assistive devices) • Support non-pharmacologic sleep interventions	• Identify underlying cause(s) of delirium and act to remove them • List current tools, assessment forms, checklists, curriculae in current use • Describe how the use of these tools is monitored/measured by leaders • Describe current staff training
Mobility Ensure that each older adult moves optimally every day to maintain function and do What Matters	• Screen for mobility issues and document the results • Promote early, frequent, and safe mobility; leverage the individual's existing strengths	• List current tools, assessment forms, checklists, curriculae in current use • Describe how the use of these tools is monitored/measured by leaders • Describe current staff training

Appendix B: 4Ms Goals and Age-Friendly Care Description Worksheet

Age-Friendly Health Systems is a movement of thousands of hospitals, practices, and nursing home communities working to ensure the best possible care for older adults. IHI recognizes organizations that have committed to practicing 4Ms care and have described 4Ms care for their setting.

Nursing Home Setting

Please document below your description of age-friendly (or 4Ms) care as your team currently describes it. To be considered age-friendly, you must explicitly engage or screen/assess older adults for all 4Ms (What Matters, Medication, Mentation, Mobility), document 4Ms information, and act on the 4Ms accordingly.

Health System Name (if applicable):

Nursing Home Name:

Key Contact (name, role, email, telephone):

Site of Care:

- ☐ Community-wide (all sections of the nursing home)
- ☐ Specialty Unit (e.g., Memory Care unit or wing only)
- ☐ SNF (skilled nursing and rehabilitation or post-acute) unit only
- ☐ Other

If Specialty Unit or Other, please describe:

	What Matters	Medication	Mentation — Dementia	Mentation — Depression	Mentation — Delirium	Mobility
Aim	Know and align care with each older adult's specific outcome goals and care preferences, including all stages of health and across settings of care	If medication is necessary, use age-friendly medication that will not negatively impact What Matters to the older adult, Mobility, or Mentation across settings of care	Educate health professionals, residents, and care partners on identification and management of dementia and related behaviors	Educate health professionals, residents, and care partners on identification and management of depression and related behaviors	Prevent, identify, treat, and manage delirium across settings of care Educate health professionals and care partners on identification and management of delirium	Ensure that each older adult moves optimally every day to maintain or improve function and to do What Matters
Screen / Assess Please check the boxes to indicate items used in your care/care plans or fill in the blanks if you check "Other."	List the question(s) you ask to know and align care with each older adult's specific outcome goals and care preferences: *Minimum requirement: One or more What Matters question(s) must be listed. Question(s) cannot focus only on advance care planning forms.*	Check the medications you screen for regularly: ☐ Benzodiazepines or other anxiolytics ☐ Opioids ☐ Highly-anticholinergic medications (e.g., diphenhydramine) ☐ All prescription and over-the-counter sedatives and sleep medications ☐ Muscle relaxants ☐ Tricyclic or other antidepressants ☐ Antipsychotics (neuroleptics)	Check the tools used to screen or assess for dementia: ☐ Mini-Cog (screen) ☐ SLUMS (assess) ☐ MOCA (assess) ☐ MMSE (assess) ☐ Other: _____	Check the tools used to screen for depression: ☐ PHQ2 ☐ PHQ9 ☐ Geriatric Depression Scale (GDS) ☐ Geriatric Depression Scale (GDS) — short form ☐ Other: _____	Check the tools used to screen for delirium: ☐ UB-CAM[10,11,12] ☐ CAM ☐ Other: _____ *Minimum requirement: At least one of the first two boxes must be checked. If only "Other" is checked, will review.*	Check the tools used to screen for mobility: ☐ Timed "Up & Go" (TUG) ☐ JH-HLM ☐ POMA ☐ Physical therapy (PT) assessment ☐ Other: _____ *Minimum requirement: One box must be checked. If only "Other" is checked, will review.*

	What Matters	Medication	Mentation — Dementia	Mentation — Depression	Mentation — Delirium	Mobility
		☐ Mood stabilizers ☐ Other: _____ *Minimum requirement: The first eight boxes must be checked.*				
Frequency	☐ Upon admission and with change in condition ☐ Once per quarter with MDS review ☐ Daily, if condition unstable or new, potentially serious diagnosis/es ☐ Daily for first 14 days if SNF ☐ Other: _____ *Minimum frequency is on admission, and once per quarter with MDS review or with any significant change in condition.*	☐ Upon admission and with change in condition ☐ Other: _____ *Minimum frequency is on admission and per standardized protocols.*	☐ On admission ☐ With change in condition ☐ Other: _____	☐ On admission and with change in mood or condition ☐ Other: _____	☐ On admission ☐ Every 24 hours and with change in condition in SNF (may include changes in behavior, appetite, sleep, or others) ☐ With change in condition and as needed in LTC ☐ Other: _____ *Minimum frequency is on admission and every 24 hours or with change in condition in SNF; with change in condition and as needed in LTC.*	☐ Once per stay and with change in condition ☐ Other: _____ *Minimum frequency is on admission and with a significant change in condition.*

	What Matters	Medication	Mentation — Dementia	Mentation — Depression	Mentation — Delirium	Mobility
Documentation Please check the box "EHR (electronic health record), care plan" or fill in the blank for "Other." Documentation should include goal setting and care plan. System should outline how clinicians find and review one another's notes to optimize communication.	☐ EHR, care plan ☐ Other: _____ *One box must be checked. If "Other," will review to ensure documentation method is accessible to other care team members for use during the nursing home stay.*	☐ EHR, care plan ☐ Pharmacy records/MAR ☐ Other: _____ *One box must be checked. If "Other," will review to ensure documentation method is accessible to other care team members for use during the nursing home stay.*	☐ EHR, care plan ☐ Other: _____ *One box must be checked. If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action by care team members.*	☐ EHR, care plan ☐ Other: _____ *One box must be checked. If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action by care team members.*	☐ EHR, care plan ☐ Other: _____ *One box must be checked. If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action by care team members.*	☐ EHR, care plan ☐ Other: _____ *One box must be checked. If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action by care team members.*
Act On Please describe how you use the information obtained from Screen/Assess to design and provide care.	☐ Align the care plan with What Matters most to the older adult ☐ Other: _____ *Minimum requirement: First box must be checked.*	☐ Educate residents, care partners ☐ Deprescribe (includes both dose reduction and medication discontinuation) ☐ Pharmacist consult _____ ☐ Confer with care partners	☐ Educate resident and care partners ☐ Prevent and mitigate unsafe behaviors r/t dementia ☐ Refer to professional organization for education and/or support	☐ Educate resident and care partners ☐ Refer for behavioral health interventions as indicated *Minimum requirement: First two boxes must be checked.*	Delirium prevention and management protocol, including, but not limited to: ☐ Investigate potential underlying medical conditions/ causes ☐ Ensure sufficient oral hydration ☐ Orient older adult to time, place, and situation on every	☐ Mobilize 2 to 3 times a day or as directed ☐ Out of bed or leave room for meals if appropriate ☐ Physical therapy (PT) intervention ☐ Avoid restraints ☐ Remove catheters and other tethering devices

	What Matters	Medication	Mentation — Dementia	Mentation — Depression	Mentation — Delirium	Mobility
		☐ Monitor for potential adverse drug events ☐ Other: _____ *Minimum requirement: At least two boxes must be checked.*			nursing shift if/when appropriate ☐ Ensure that older adult has their personal adaptive equipment (e.g., glasses, hearing aids, dentures, walkers) ☐ Prevent sleep interruptions; use non-pharmacological interventions to support sleep ☐ Avoid high-risk medications; monitor for adverse drug events ☐ Other: _____ *Minimum requirement: First five boxes must be checked.*	☐ Avoid high-risk medications ☐ Multifactorial fall prevention protocol (e.g., STEADI) ☐ Educate older adult and family caregivers ☐ Manage conditions that reduce mobility (e.g., pain, balance, gait, strength) ☐ Ensure safe environment for mobility ☐ Identify and set a daily mobility goal with older adult that supports What Matters; review and support progress toward the goal ☐ Other: _____ *Minimum requirement: Must check first box and at least one other box.*

	What Matters	Medication	Mentation — Dementia	Mentation — Depression	Mentation — Delirium	Mobility
Primary Responsibility Indicate if one care team member has primary responsibility/ accountability for acting on one or more of the 4Ms and for leading other clinicians or care partners in acting on the 4Ms. **If multiple team members are involved, check all that apply, and circle primary team member.**	☐ Nurse ☐ Clinical Assistant (e.g., certified nursing assistant or CNA) ☐ Social Worker ☐ MD/NP/PA ☐ Pharmacist ☐ Care Manager ☐ Other: _____ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ MD/NP/PA ☐ Pharmacist ☐ Other: _____ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant/CNA ☐ Social Worker ☐ MD/NP/PA ☐ Pharmacist ☐ Neurology consult ☐ Psych consult ☐ Behavioral/ mental health consult ☐ Other: _____ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant/CNA ☐ Social Worker ☐ MD/NP/PA ☐ Pharmacist ☐ Neurology consult ☐ Psych consult ☐ Behavioral/ mental health consult ☐ Other: _____ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant/CNA ☐ Social Worker ☐ MD/NP/PA ☐ Pharmacist ☐ Neurology consult ☐ Psych consult ☐ Behavioral/ mental health consult ☐ Other: _____ *Minimum requirement: One role must be selected.*	☐ Nurse ☐ Clinical Assistant/CNA ☐ Social Worker ☐ MD ☐ Pharmacist ☐ PT ☐ OT ☐ Therapeutic Recreation/Activities ☐ Other: _____ *Minimum requirement: One role must be selected.*

Appendix C: Assess, Act On, and Get Started with Age-Friendly Care

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
What Matters Ask the older adult What Matters, including specific health outcome goals and care preferences	If you do not have existing questions to start this conversation, try the following and adapt as needed: *"What do you most want to focus on while you are here for_____ (fill in health problem) so that you can do_____ (fill in desired activity) more often or more easily?"* [13,14,15] For older adults with advanced or serious illness, consider: *"What are your most important goals if your health situation worsens?"* [16]	**Tips** • This action focuses clinical encounters, decision making, and care planning on What Matters most to the older adults. • Consider segmenting your population by healthy older adults, those with chronic conditions, those with serious illness, and individuals at the end of life. How you ask What Matters of each segment may differ. • Consider starting these conversations with *who* matters to the person. Then ask them what their plans are related to life milestones, travel plans, birthdays, and so on in the next six months to emphasize, "I matter, too." Once "who matters" and "I matter, too" are discussed, then *what* matters becomes easier to discuss. The What Matters Most letter template (Stanford Letter Project) can guide this discussion. • Responsibility for asking What Matters can rest with any member of the care team; however, one person needs to be identified as responsible to ensure it is reliably done. • You may decide to include family or care partners in a discussion about What Matters; however, it is important to also ask the older adult individually. • Ask people with dementia What Matters. • Ask people with delirium What Matters at a time when delirium symptoms are minimal or absent. **Additional Resources** • "What Matters" to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • The Conversation Project and "Conversation Ready" • Patient Priorities Care • Serious Illness Conversation Guide • Stanford Letter Project • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
		• End-of-Life Care Conversations: Medicare Reimbursement FAQs • National POLST: Long-Term Care Facility Guidance for POLST and COVID-19 • Ariadne Labs Serious Illness Care Program: COVID-19 Response Toolkit (a guide for long-term care, implementation tips, and a demonstration video) • Respecting Choices COVID-19 Resources (for having conversations with older adults when planning care for COVID-19) We recognize that members of different groups have diverse needs. There are resources available that are specific to various communities. For example, the following resources can help to integrate an LGBTQ lens into this action: • Caregiving in the LGBT Community: • Create Your Care Plan • My Personal Directions for Quality Living • Advocating for Yourself • Supporting LGBT People Living with Dementia • Issue Brief: LGBT People and Dementia • Inclusive Services for LGBT Older Adults: A Practical Guide to Creating Welcoming Agencies
What Matters Document What Matters	Documentation can be on paper, on a whiteboard (following privacy guidelines), or in the electronic health record (EHR) where it may be accessible to the whole care team across settings.[17]	**Tips** • Following state and federal privacy regulations, consider converting whiteboards to What Matters boards and include information about the older adults (e.g., what they like to be called, favorite foods, favorite activities, what concerns or upsets them, what soothes them, assistive devices, and family/care partner names and phone numbers). Identify who on the care team is responsible for ensuring that the information is updated. • Consider documentation of What Matters to the older adult on paper or electronic format that they can have and review. • Identify where health and health care goals and priorities can be documented and available across care teams and settings. • Review What Matters documentation to ensure that goals/plans are specific to each person (i.e., watch out for generic or the same answer across all people, which suggests a deeper discussion of What Matters is warranted).

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
		Additional Resources (also see resources in the section above) • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council) • My Story for Family Caregivers • CMS COVID-19 Nursing Home Telehealth Toolkit • CMS Resources on Current Emergencies
Medication Review for high-risk medication use	Specifically, look for: • Benzodiazepines, anxiolytics • Opioids • Highly-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic and other antidepressants • Mood stabilizers • Antipsychotics[18,19,20]	**Tips** • A comprehensive approach to medication optimization with input from multiple team members should be part of a center's Quality Assurance Performance Improvement (QAPI) plan. • Include input and insights from CNAs — they spend the most time with residents. • If your team decides to limit the number of medications to focus on, identify those most frequently dispensed in your nursing home or unit, or those for which there is a champion to deprescribe. Include PharmD, medical director, nurse leader(s), and social worker if possible. **Additional Resources** • American Geriatrics Society 2019 (or most recent) Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults • AGS 2019 Beers Criteria Pocketcard (or most recent version) • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines
Mentation — Dementia Assess for cognitive challenges (dementia or other conditions such as mild cognitive impairment or MCI)	If you do not have an existing tool, try using the Mini-Cog©[21]	**Tips** • Reduce any stress related to cognitive screening. For example, you could say, "I'm going to check your brain or cognitive health like we check your blood pressure, or your heart and lungs." • Emphasize an older adult's strengths when screening and document it so that all providers understand the person's baseline cognitive status. • If the resident has a sudden change (day, weeks) in cognition, consider and rule out delirium.

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
		Additional Resources • Saint Louis University Mental Status (SLUMS) Exam • Montreal Cognitive Assessment (MoCA)
Mentation — Depression Assess for depression	If you do not have an existing tool, try using the Patient Health Questionnaire – 2 (PHQ-2).[22] Consider the PHQ-9 (longer screening tool).	**Tips** • Depression is often under-recognized in older adults and nursing home residents. **Additional Resources** • Patient Health Questionnaire – 9 (PHQ-9) • Geriatric Depression Scale (GDS) and GDS: Short Form to assess for depression in individuals who are living with dementia or other cognitive challenges

Mentation — Delirium
 	
Screen for delirium at regular intervals (e.g., every 24 hours for post-acute care residents; as needed or with change in condition for long-term care residents; more often if resident is unstable)
	If you do not have an existing tool, try using the CAM or Ultra-Brief 2-Item Screener (UB-2).[23,24]	**Tips**
		• Decide on the tool that best fits your resident population and your team's approach.
		• Be aware that low prevalence rates of delirium before the 4Ms are in place may indicate inaccurate use of a screening or assessment tool, or failure to reliably screen/assess.
		• It is critical to use any tool only as instructed and to do ongoing training (annual competency) to make sure it is being used correctly.
		• Ask questions in a way that emphasizes older adults' strengths (e.g., "Please tell me the day of the week" rather than "Do you know what day it is today?").
		• Educate family/care partners on the signs of delirium and enlist their support to alert the care team to any changes as soon as they notice them. Ask them if the resident seems "like themselves."
		• Document mental status in the chart to measure changes.
		• Until ruled out, consider a change in mental status to be delirium and raise awareness among care team and family/care partners about the risk of delirium superimposed on dementia.
		• Note: Delirium has an underlying medical cause and is preventable and treatable in most cases. Care teams need to:
		  1. Confer with interprofessional team and care partners to remove or treat underlying cause(s)
		  2. Restore or maintain function and mobility

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	**Getting Started**	**Tips and Resources**
		3. Understand behaviors that could be related to underlying delirium 4. Prevent delirium complications **Additional Resources** • Confusion Assessment Method (CAM) and its variations • Nursing Delirium Screening Scale (Nu-DESC) • Hospital Elder Life Program (HELP) • American Delirium Society
Mobility Screen for Mobility limitations, indications for a PT and/or OT referral	If you do not have an existing tool, try using Timed "Up & Go" (TUG).[25,26]	**Tips** • Older adults may be embarrassed or worried about having their mobility screened. • Underscore that a mobility screen allows the care team to know the strengths of the older adult, and potential opportunities to improve weak areas. • If What Matters to the resident is returning to their home, focus on how assessing mobility can lead to interventions to make their home safer and to prevent falls or injuries. **Additional Resources** • Johns Hopkins – Highest Level of Mobility (JH-HLM) Scale • Stopping Elderly Accidents, Deaths, & Injuries (STEADI) • AHRQ's Safety Program for Nursing Homes: On-Time Falls Prevention (2017) • Performance-Oriented Mobility Assessment (POMA)[27]

Act On: Incorporate the 4Ms into Care Delivery and Document in the Care Plan		
Key Actions	**Getting Started**	**Tips and Resources**
What Matters Align care delivery and care plan documentation with What Matters	Incorporate What Matters into the goal-oriented plan of care and align the care plan with the older adult's goals and preferences[28,29,30] (i.e., What Matters).	**Tips** • Health outcome goals are the activities that matter most to an individual, such as playing with a grandchild, walking with friends in the morning, or continuing to work as a teacher. Health care preferences include the medications, health care visits, testing, and self-management tasks that an individual is able and willing to do. • When you focus on the person's priorities, Medication, Mentation, and Mobility often come up so the person can do more of What Matters. • Consider how care while in the nursing home can be aligned with What Matters. • Consider What Matters to the older adult when making discharge plans. • Use What Matters to develop the care plan and navigate trade-offs. For example, you may say, "There are several things we could do, but knowing what matters most to you, we could…" • Use the person's priorities (not focused on diseases) in communicating, decision making, and assessing benefits. • Use collaborative conversation and motivational interviewing;[31,32] agree there is no single answer, and brainstorm alternatives together. For example, you may say, "I know you don't like the CPAP mask, but are you willing to try it for two weeks to see if it helps you be less tired, so you can get back to volunteering, which you said was most important to you?" • Care options likely involve input from many disciplines (e.g., physical therapy, social work, community organizations, behavioral health, and others), as well as care partners in some cases. **Additional Resources** • "What Matters" to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • Patient Priorities Care • Serious Illness Conversation Guide • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)

Act On: Incorporate the 4Ms into Care Delivery and Document in the Care Plan		
Key Actions	**Getting Started**	**Tips and Resources**

Medication
 	
Deprescribe or do not prescribe high-risk medications**
	Consider avoiding or deprescribing the high-risk medications listed below.
	
	• Benzodiazepines or other anxiolytics
	• Opioids
	• High-anticholinergic medications (e.g., diphenhydramine)
	• All prescription and over-the-counter sedatives and sleep medications
	• Muscle relaxants
	• Tricyclic antidepressants
	• Mood stabilizers
	• Antipsychotics[33,34,35,36]
	
	If the older adult takes one or more of these medications, discuss any concerns the person may have, assess for adverse effects or interactions, and discuss deprescribing with the older adult.[37]
		Tips
		
		• These medications, individually and in combination, may interfere with What Matters, Mentation, and safe Mobility of older adults because they may increase the risk of confusion, delirium, unsteadiness, and falls.[38]
		• Deprescribing includes both dose reduction and medication discontinuation.
		• Deprescribing is a positive, person-centered approach, requiring informed consent, shared decision making, close monitoring, and compassionate support.
		• When possible, avoid prescribing high-risk medications (prevention); consider changing order sets to change prescribing patterns (e.g., adjust/reduce doses, change medications available). You may work with your PharmD or pharmacy consultant on policy changes.
		• Your nursing home should have dementia, delirium, falls prevention/mobility promotion and management protocols that include guidance to avoid high-risk medications.
		• Offer non-pharmacological options to support sleep and manage pain.
		• Upon discharge, do not assume all medications should be continued. Remove medications the older adult can stop taking upon discharge.
		• Print a medication list as part of standard check-out steps and ensure that the older adult and family/care partners understand what the medications are for, how to take them, why they are taking them, and how to monitor whether they are helping or possibly causing adverse effects.
		• Review medication names to avoid duplication or confusion with generic and trade names.
		• Inform the person's ambulatory care clinicians of medication changes.
		• Consult pharmacist (PharmD).
		• When instituting an age-friendly approach to medications:
		  o Identify who on your team will be the champion of this "M." The champion may not be a pharmacist, but it is vital to have a pharmacist or primary care clinician, as well as the resident, work on the plan.
		  o Review your setting or system's data, if possible, to identify medications that may be high risk (e.g., anticoagulants, insulin, opioids) or potentially inappropriate (e.g.,anticholinergics, sedating medications).
		  o Determine the goal(s) with respect to medication(s) identified in the previous step.
		  o Conduct a series of PDSA cycles to achieve the goal(s).
		
		Additional Resources
		
		• deprescribing.org
		• Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines

Act On: Incorporate the 4Ms into Care Delivery and Document in the Care Plan		
Key Actions	**Getting Started**	**Tips and Resources**
		• [Alternative Medications for Medications Included in the Use of High-Risk Medications in the Elderly and Potentially Harmful Drug–Disease Interactions in the Elderly Quality Measures](#) • [HealthinAging.org](#) provides expert health information for older adults and caregivers about critical issues we all face as we age • [Crosswalk: Evidence-Based Leadership Council Programs and the 4Ms](#)
Mentation Ensure sufficient oral hydration**	Identify a target amount of oral hydration appropriate for the older adult and monitor to confirm it is met.	**Tips** • Ensure that water and other preferred, noncaffeinated fluids are available at the bedside and accessible to the older adult. • The focus here is on oral hydration so that the person is not on an IV that may interfere with Mobility. • Your nursing home should have a delirium prevention and management protocol that includes oral hydration. • Replace pitchers with straws and water bottles for easier use by older adults. • Include CNAs in data collection on how much oral hydration the person takes in over 24 hours.
Mentation — Dementia Consider further evaluation by geriatric psychiatry, psychology, or neurology if/when indicated	Share test and evaluation results with the older adult and care partners. Assess for modifiable contributors to cognitive challenges. Consider further diagnostic evaluation if appropriate. Follow current guidelines for management of dementia and related behavioral manifestations of distress. Provide educational materials to the older adult and family/care partners. Consider referring the older adult, family/care partners to supportive	**Tips** • Know about and refer older adults and their care partners to local organizations and resources to support them with education and/or guidance. • Include family members and/or care partners if/when appropriate. They may provide a source of information and support. • Consider assessing and managing care partner burden. • If a memory disturbance is found, avoid medications that may worsen cognitive health. • If there is a diagnosis of dementia, include it on the problem list. If not, include cognitive changes if they are present. • Do not prescribe medications that can exacerbate cognitive limitations, such as benzodiazepines, antipsychotics, or anticholinergics. • Older adults with dementia will be at high risk of delirium, especially in a new setting, so educate family and providers on delirium prevention. Review sections and resources on delirium. **Additional Resources** • [Alzheimer's Association](#)

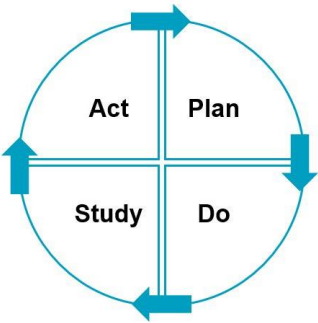| Act On: Incorporate the 4Ms into Care Delivery and Document in the Care Plan		
Key Actions	**Getting Started**	**Tips and Resources**
	resources, such as the Alzheimer's Association.[39]	• Zarit Burden Interview (for caregivers) • CMS National Partnership to Improve Dementia Care
Mentation — Depression Identify and manage factors contributing to depression	Identify and manage factors that contribute to depressive symptoms, including sensory limitations (vision, hearing), social isolation, losses of aging (job, income, societal roles), bereavement, and medications. Consider the need for counseling and/or pharmacological treatment of depression or refer to a mental health provider if appropriate.	**Tips** • Educate the resident and care partner (if appropriate) about depression in older adults. • Recognize social isolation as a risk factor for depression and identify resources that support social connections. • Include technology solutions such as platforms that support visual and audio communication (e.g., FaceTime, Zoom, Skype, others). **Additional Resources** Crosswalk: Evidence-Based Leadership Council Programs and the 4Ms
Mentation — Delirium Orient older adults to time, place, and situation if and when appropriate**	Make sure day and date are updated on the whiteboard. Provide an accurate clock with large face visible to older adults. Consider the use of tools such as an "All About Me" board or poster/card that reflects what helps an older adult feel calm, who is important to them, names of pets or children, sports teams, etc. Ask care partners and resident about favorite people/activities. Provide newspapers and other periodicals to residents who enjoy looking at them. Consider using computer/electronic and social media.	**Tips** • For older adults with dementia and superimposed delirium, consider gentle re-orientation or use of orienting cues; avoid repeated testing about orientation if the older adult appears confused or overwhelmed.[40] • Conduct orientation during every nursing shift for appropriate residents. For residents with delirium, re-orientation may be counterproductive. Assess each person individually and evaluate whether re-orientation is helpful or not. • Consult your nursing home's delirium prevention and management protocol. • Identify environmental and person-centered approaches to orienting older adults as appropriate. • Meet the person "where they are" — do not try to correct a resident who believes it is a much earlier time or that their mother or father needs to visit. Use techniques such as distraction or diversion, a walk inside or outside, looking through favorite picture books, listening to music and dancing, etc.

Act On: Incorporate the 4Ms into Care Delivery and Document in the Care Plan		
Key Actions	**Getting Started**	**Tips and Resources**
	Invite care partners to bring familiar and favorite items from home (e.g., family pictures, DVDs, music).	
Mentation — Delirium Ensure older adults have their personal adaptive equipment**	Incorporate routine intake and documentation of each older adult's personal adaptive equipment. At the beginning of each shift, check for sensory aides. If indicated, offer to clean them. If needed, offer the older adults a listening device or hearing amplifier from the unit.	**Tips** • Personal adaptive equipment includes glasses, hearing aids, dentures, canes, wheelchairs, and walkers. • Your SNF/NF's delirium prevention and management protocol should include helpful interventions. • Note use of personal adaptive equipment on the whiteboard. • Confirm need for personal adaptive equipment with care partners.
Mentation — Delirium Prevent sleep interruptions; use non-pharmacological interventions to support sleep**	Avoid overnight vital sign checks and blood draws unless absolutely necessary. Create and use sleep kits.[41,42] Sleep kits include items such as a small CD player and CD to play relaxing music, lotion for a backrub or hand massage, non-caffeinated tea, lavender, sleep hygiene educational cards (that, for example, stipulate no caffeine after a certain time or promote physical activity). These can be placed in a box on the unit to use in resident rooms as needed.	**Tips** • Nonpharmacological sleep aids include earplugs, sleeping masks, muscle relaxation such as hand massage, posture and relaxation training, white noise and music, and educational strategies. • Your nursing home's delirium prevention and management protocol should include non-pharmacological sleep support. • Make a sleep kit available for order in the EHR or written record. • Engage care partners to support sleep with methods that are familiar to and effective with the resident.

Act On: Incorporate the 4Ms into Care Delivery and Document in the Care Plan		
Key Actions	**Getting Started**	**Tips and Resources**
Mobility Ensure early, frequent, and safe mobility**[43,44,45]	Mobilize 2 to 3 times a day or as directed and as tolerated. Set and meet a daily mobility goal developed with or by each older adult. Encourage residents to be out of bed as much as possible and have them leave their room for meals if they agree.	**Tips** • Assess and manage impairments that reduce mobility, for example: o Manage pain o Assess challenges with strength, balance, or gait o Remove catheters, IV lines, telemetry, and other tethering devices as soon as possible o Avoid physical and chemical restraints o Avoid sedatives and drugs that immobilize residents o Ensure that glasses and hearing aids are in use • Refer to physical therapy for interventions to help with balance, strength, gait, gait training, or an exercise program if needed. Consider referral to occupational therapy. • Your nursing home's delirium prevention and management protocol or falls prevention protocol should address mobility. • Engage the older adult and care partners directly by offering exercises that can be done in bed or in resident's room (e.g., write out/show diagrams of appropriate exercises on a placemat that remains in the room). **Additional Resources** • [Hospital Elder Life Program (HELP) Mobility Change Package and Toolkit](#)

**These activities may also help to prevent delirium[46] and falls.

Appendix D: Sample PDSA Cycles for Age-Friendly Care

Example PDSA Worksheet: Testing What Matters Engagement with Older Adults

Plan-Do-Study-Act Record	**NAME OF NURSING HOME:** Fairview Nursing Center
	NAME OF PERSON COMPLETING FORM: Erin Rush, RN
	DATE: March 29, 2022

(Act, Plan, Study, Do cycle diagram)	**Change Idea to _____ develop or _X_ test or _____ implement**
	Description: Cycle 1: Test a What Matters engagement with a nursing home resident. **Essential Ingredients** **Ask What Matters** • Who? • When? • Using what question(s)? **Document What Matters** • Who? • What? • Where? **Align the Care Plan with What Matters** • Who? • How do we know if that has happened?

PLAN:

Questions: What do we want to know?

- Can primary care providers incorporate What Matters engagements into rounds with older adult residents?
- Will primary care providers learn something useful from this What Matters engagement relevant to care planning?

Predictions: What do we think will happen?

- Primary care providers can incorporate What Matters engagements into rounds with older adults.
- Primary care providers can learn something useful from What Matters engagements relevant to care planning.

Plan for the change or test: Who, What, When, Where. What are we going to do to make our test happen?

List the tasks necessary to complete this test (What)	Person responsible (Who)	When	Where
Orient Dr. M to this test	Erin	Monday morning	4 South
Select older adult for test	Erin and Dr. M	Monday morning	4 South
Ask older adult, "What's important to you while here in the nursing home?"	Erin and Dr. M	Monday	TBD
Debrief test and complete PDSA cycle	Erin and Dr. M	Tuesday morning	4 South

Plan for data collection: Who, What, When, Where. How will we compare predictions to actual?

Erin and Dr. M to meet the next day to debrief test, capture what happened, impressions, how that compared to predictions, next steps.

DO: Carry out the change or test; collect data and begin analysis; describe the test/what happened.

- Dr. M asked 1 and then 4 more older adults — went beyond testing with just 1 person!
- Some answers were very health-/condition-related (e.g., a person with shortness of breath/cough stated, "I just want my cough to be better and to be able to breathe").
- Other answers were more related to quality of life, for example:
  - A person being treated for stroke, who is a performance artist, shared a video of performance and indicated What Matters is to be able to return to performing.
  - A person with multiple falls wants to be able to stand to cook again.

STUDY: Complete data analysis; summarize what was learned; compare what happened to predictions above.

- Asking a single question is not sufficient. Need the opportunity for follow-up questions and listening. For example: A short-term, post-acute person with heart failure and arthritis has an immediate goal to reduce swelling in her legs. Further probing revealed a desire to stay in her home after SNF discharge and be able to cook to avoid delivered salty foods and to avoid rehospitalization. Possible solution: Consider homemaker assistance, nutrition coaching.

- Dr. M regularly engages people with What Matters in an outpatient setting. Addressing What Matters with nursing home residents is new for him, but he believes is feasible to include.

- Worthwhile if there is time for follow-up (not just one question and one answer in 30 seconds).

- No one responded with goals or needs that could not be addressed somehow in the care plan.

- Asking a What Matters question feels awkward. Need to build a relationship first before asking an "intimate" question. For example, asking on the second interview/interaction feels better than asking on the first day.

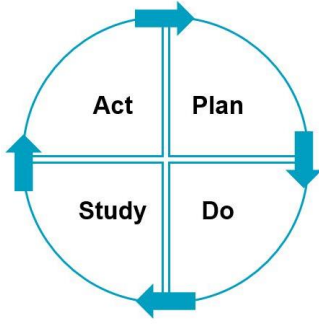- Asking a What Matters question helped Dr. M bond with the residents.

- There was a lack of clarity on what to do with the information learned from the What Matters engagement (e.g., how to document, how to share).

- Still have a concern about not knowing what to do if a person expresses a need or goal beyond the specific health condition or issues that the physician (Dr. M) is trained to address.

ACT: Are we ready to make a change? Plan for the next PDSA cycle.

Test again. Questions to explore through more testing include:

- Is it better to ask the What Matters question at the beginning or end of an interview/planned conversation with the resident?

- How can we get at What Matters for our residents with cognitive impairment?

- Where is the best place to document the information from the What Matters engagement?

  o Whiteboard: "Anyone" can use the whiteboard. Can this be done effectively and keep compliant with privacy regulations?

- Are the daily multidisciplinary rounds/huddles the best place to discuss what's learned from What Matters engagements?

  o Do we need to coordinate our engagement about What Matters? Nursing, care management, and physicians all could be asking variants of What Matters.

- Could the nurse or case manager have a What Matters conversation and document it so that it is available for primary care providers to reference in a consult visit or rounding?

Blank PDSA Worksheet

Plan-Do-Study-Act Record	**NAME OF NURSING HOME:** **NAME OF PERSON COMPLETING FORM:**

Change Idea to _____ develop or ____ test or _____ implement

Description:

Essential Ingredients

Ask What Matters	Document What Matters	Align the Care Plan with What Matters
• Who? • When? • Using what question(s)?	• Who? • What? • Where?	• Who? • How do we know if that has happened?

PLAN:

Questions: What do we want to know?

Predictions: What do we think will happen?

Plan for the change or test: Who, What, When, Where. What are we going to do to make our test happen?			
List the tasks necessary to complete this test (What)	**Person responsible (Who)**	**When**	**Where**

Plan for data collection: Who, What, When, Where. How will we compare predictions to actual?

DO: Carry out the change or test; collect data and begin analysis; describe the test/what happened.

STUDY: Complete analysis of data; summarize what was learned; compare what happened to predictions above.

ACT: Are we ready to make a change? Plan for the next cycle.

Appendix E: Implementing Reliable 4Ms Age-Friendly Care

> A key goal is to reliably integrate the 4Ms into the way you provide care for every older adult, in every setting, every time.
>
> How will you know that 4Ms care, as described by your site, is reliably in place?

The best way is to observe the work directly, using the 4Ms Age-Friendly Care Description Worksheet (see Appendix B) as an observation guide. Another way is to review charts to confirm completeness of 4Ms documentation and alignment of care team actions with information obtained in assessment. Note that you only need a handful of resident charts to tell you that your 4Ms performance is not at a high level (say, 95 percent or higher).[47] For example, if you see three instances of incomplete 4Ms care in a random sample of 10 resident charts, you have strong evidence that your system is not performing in a way that 95 percent or more of older adults are experiencing 4Ms care.

If an outside evaluator visited your care setting, they might also look for several kinds of evidence that your site has the foundation for reliable 4Ms care, including the following:

- If they ask five staff members, those staff members use the same explanation for WHY your site implements the 4Ms.

- If they ask five staff members, those staff members use the same explanation for HOW your site implements the 4Ms.

- Staff at your site have documentation for the 4Ms; they can access the 4Ms Age-Friendly Care Description and additional standard supporting operating procedures, flowcharts, and/or checklists.

- Training/orientation introduces new staff to the 4Ms work.

- Job description(s) outline elements of the 4Ms work as appropriate to the role(s).

- Performance evaluation refers to the 4Ms work.

Evaluators would also expect to learn about regular observation of 4Ms care by site supervisors and leaders who seek to understand and work with staff to remove barriers to reliable 4Ms care.

Appendix F: Measuring the Impact of 4Ms Age-Friendly Care

An age-friendly measurement dashboard can help your nursing home understand the impact of the team's efforts to reliably provide 4Ms care to older adults. This can be accomplished in two ways:

1. Segment an existing dashboard by age and monitor performance for older adults; or

2. Focus on a small set of basic outcome measures for older adults.

The tables below list the outcome measures that IHI identified to help nursing homes understand the impact of 4Ms age-friendly care. These measures are not designed to compare or rank nursing homes in "age-friendliness." We seek to outline measures that are "good enough" to establish baseline performance and are sensitive to improvements, while paying attention to feasibility for nursing homes with a range of skills and capacity in measurement.

Basic Outcome Measures for Nursing Home Setting	
30-day readmissions	X
Emergency department utilization	X
Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey questions	CAHPS Nursing Home Surveys (Long-Stay Resident, Discharged Resident, Family Member)
Length of stay	X

Advanced Outcome Measures for Nursing Home Setting	
Delirium	
collaboRATE (or similar tool such as PELI adopted by your site to measure goal concordant care)	

Additional Data Stratification: Race and Ethnicity

We recognize the persistence of important differences in treatment and health outcomes associated with race, ethnicity, and other social factors. Health equity requires that nursing homes stratify data for key performance measures by these factors to reveal disparities and incentivize action to eliminate them. For nursing homes aiming to provide reliable 4Ms age-friendly care, we encourage stratifying outcome measures for older adults using the Office of Management and Budget core race and ethnicity factors to identify disparities in older adult care and experience.

Glossary of Terms

Care partner or caregiver: A person (family member, friend, neighbor, coworker, other) who supports an older adult/patient/resident with physical, psychological, financial, or other issues related to health.

Health professional: A person who plays a role on the health care team or performs in a clinical role. Examples include physicians; nurses; social workers; pharmacists; mental or behavioral health providers (e.g., psychologists); physical, occupational, or speech therapists; recreational therapists; nutritionists; and others.

Interprofessional: Health care team member that works together with other health professionals to integrate each of their disciplines.

Multidisciplinary or interdisciplinary team: Health care teams comprising health professionals from multiple different disciplines such as nursing, medicine, therapy, and pharmacy.

Primary care provider: A health professional that provides primary health care such as a physician, nurse practitioner, or physician's assistant.

Unit: A term used to describe a section of a nursing home. Used interchangeably with floor, neighborhood, community, wing, or other terms.

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