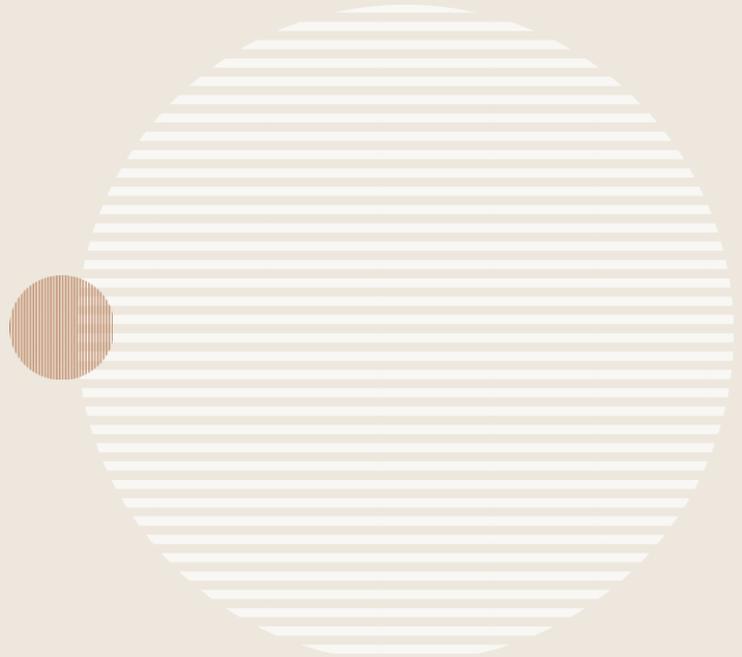




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Improvement



Age-Friendly Health Systems: Guide to Using the 4Ms in the Care of Older Adults

April 2019

This content was created especially for:

Age-Friendly 
Health Systems

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

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Thank you to the five prototype health systems — Anne Arundel Medical System, Ascension, Kaiser Permanente, Providence St. Joseph, and Trinity — for stepping forward to learn what it takes to become an Age-Friendly Health System.

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Age-Friendly Health Systems Overview

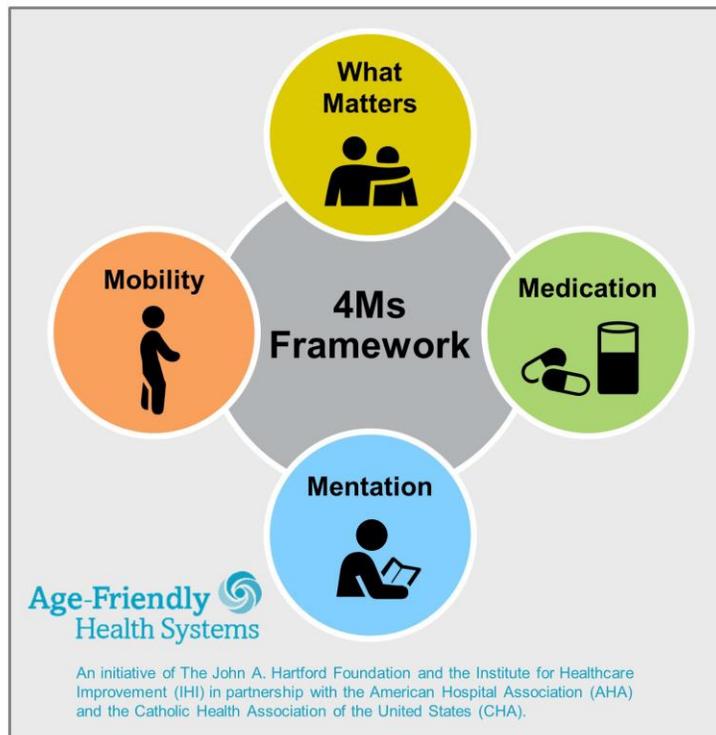
The United States is aging. The number of older adults, individuals ages 65 years and older, is growing rapidly. As we age, care often becomes more complex. Health systems frequently are not prepared for this complexity, and older adults suffer a disproportionate amount of harm while in the care of the 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, which:

- Follows an essential set of evidence-based practices;
- Causes no harm; and
- Aligns with What Matters to the older adult and their family caregivers.

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 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, end-of-life care, and across settings of care.

Medication

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.

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 care of older adults that can be complex, more manageable. The 4Ms identify the core issues that should drive all care and decision making with the care of older adults. They organize care and focus on the 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

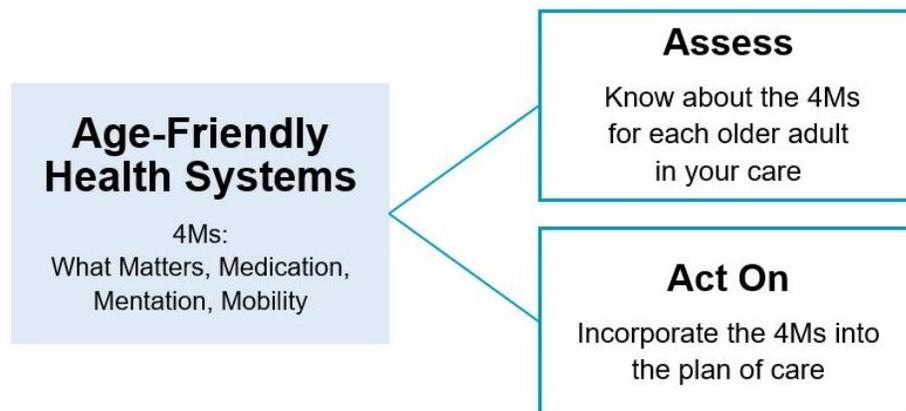
The 4Ms are a framework, not a program, to guide all care of older adults wherever and whenever they touch your health system’s care and services. The intention is to incorporate the 4Ms into existing care, rather than layering them on top, to organize the efficient delivery of effective care. This is achieved primarily through redeploying existing health system resources. Many health systems have found they already provide care aligned with one or more of the 4Ms for many of their older adult patients. Much of the effort, then, is to incorporate the other elements and organize care so all 4Ms guide every encounter with an older adult and their family caregivers.

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 system 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 across your system.
- The 4Ms are 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: knowing about the 4Ms for each older adult in your care (“assess”), and incorporating the 4Ms into the plan of care accordingly (“act on”) (see Figure 2). Both are supported by documentation and communication across settings and disciplines.

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



Developed with our expert faculty and advisors (see Appendix A) and five pioneering health systems — Anne Arundel Medical Center, Ascension, Kaiser Permanente, Providence St. Joseph Health, and Trinity Health — this Guide to Using the 4Ms in the Care of Older Adults is designed to help care teams test and implement a specific set of evidence-based, geriatric best practices across the 4Ms in your setting. Though assessing and acting on the 4Ms is similar in most care settings, there are some differences. This Guide begins by outlining the 4Ms for hospital-based and ambulatory/primary care-based settings.

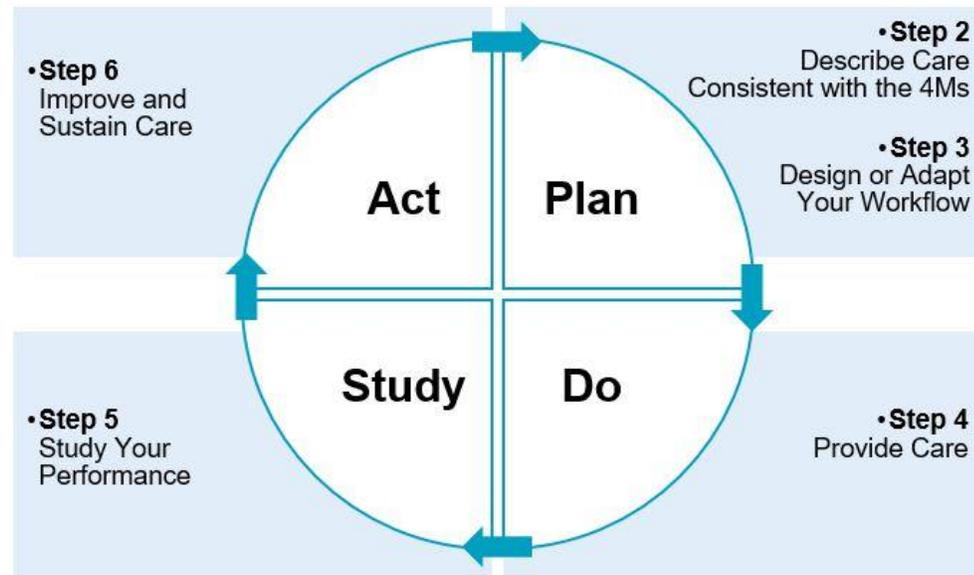
Putting the 4Ms into Practice

A “recipe” for integrating the 4Ms into your standard care has steps and ingredients, just like a recipe to make a salad, main dish, or dessert. These steps include:

1. Understand Your Current State
2. Define Care Consistent with the 4Ms
3. Describe or Adapt Your Workflow
4. Provide Care
5. Study Your Performance
6. Improve and Sustain Care

While we present the six steps as a sequence, in practice you can approach steps 2 through 6 as a loop aligned with [Plan-Do-Study-Act cycles](#) (see Figure 3).

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



Step 1. Understand Your Current State

The aim of an Age-Friendly Health System is to reliably apply the two key drivers of age-friendly care: assess and act on the 4Ms with all older adults. Almost all systems integrate some of the 4Ms into care, some of the time, with some older adults, in some place in their system. 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 for your journey to becoming an Age-Friendly Health System by understanding your current state – knowing the older adults and the 4Ms in your health system currently – and then selecting a care setting and establishing a team to begin testing.

Know the Older Adults in Your Health System

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

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

Age Group	Number	Percent of Total Patients
18–64 years		
65–74 years		
75–84 years		
85+ years		
Total Number of Adult Patients		100%

For adult patients ages 65 and older in your care, outline their language, race/ethnicity, and religious and cultural preferences (see Table 2) and health literacy levels (see Table 3).

Table 2. Language, Race/Ethnicity, and Religious and Cultural Preferences of Patients 65 Years and Older

Language:	Percent of Total Patients Ages 65+
Race/Ethnicity:	Percent of Total Patients Ages 65+
Religious and Cultural Preferences:	Percent of Total Patients Ages 65+

Table 3. Health Literacy Levels of Patients 65 Years and Older

Health Literacy Level	Percent of Total Patients Ages 65+
Low	
Moderate	
High	

Know the 4Ms in Your Health System

To identify where the 4Ms are in practice in your health system, walk through activities as if you were an older adult or family caregiver. In an ambulatory setting, that may include making an appointment for an Annual Wellness Visit, preparing to come to an Annual Wellness Visit, observing an appointment, and understanding who on the care team takes responsibility for each of the 4Ms. In an inpatient setting, go through registration, spend time on a unit, and sit quietly in the hall of a unit. Look for the 4Ms in action. You will find aspects that make you proud and others that leave you disappointed. Try not to be judgmental. Find bright spots, opportunities, and champions of each of the 4Ms in your system.

Use the form provided in Appendix B to note what you learn.

Select a Care Setting to Begin Testing

Once you know about your older adults and identify where the 4Ms currently exist in your health system, select a care setting in which to begin testing age-friendly interventions. Some questions to consider when selecting a site:

- Is there a setting that regularly cares for a larger number of older adults?
- Is there will to become age-friendly and improve care for older adults? Is there a champion?
- Is this setting relatively stable (i.e., not undergoing major changes already)?
- Does this setting have access to data? (See the Study Your Performance section below for more on measurement. Data is useful, though not required.)
- Can this setting be a model for the rest of the organization? (Modeling is not necessary, but useful to scale-up efforts.)
- Is there a setting where your team members have experience with the 4Ms either individually or in combination? Do they already have some processes, tools, and/or resources to support the 4Ms?
- Is there a setting where the health literacy levels, language skills, and cultural preferences of your patients match the assets of the staff and the resources provided by your health system?

Set Up a Team

Based on our experience, teams that include the certain roles and/or functions are most likely to succeed (see Table 4).

Table 4. Team Member Roles

Team Member	Description
An Older Adult and Caregiver	<p>Patients and families bring critical expertise to any improvement team. They have a different experience with the system than providers and can identify key issues. We highly recommend that each team has at least one older adult patient or family member or other caregiver (ideally more than one), or a way to elicit feedback directly from patients (e.g., through a Patient and Family Advisory Council).</p> <p>Additional information about appropriately engaging patients and families in improvement efforts can be found on the Institute for Patient- and Family-Centered Care website.</p>
Leader/Sponsor	<p>This person champions, authorizes, and supports team activities, as well as engages senior leaders and other groups within the organization 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:</p> <ul style="list-style-type: none"> • 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 (EHR), 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	<p>This person represents the disciplines involved in the 4Ms and works effectively with the clinicians, other technical experts, and leaders within the organization. We recommend placing the manager of the unit where changes are being tested in this role so that individual can move nimbly to take necessary action and make the recommended changes in that unit and is invested in sustaining changes that result in improvement.</p>
Clinicians who Represent the Disciplines Involved in the 4Ms	<p>These individuals may include a physician, nurse, physical therapist, social worker, pharmacist, chaplain, 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.</p> <p>These champions have good working relationships with colleagues and are interested in driving change to achieve an Age-Friendly Health System. Consider professionals who are opinion leaders in the organization, who are sought by others for advice, and who are not afraid to test and implement change.</p>
Others	<ul style="list-style-type: none"> • Improvement coach • Data analyst/EHR analyst • Finance representative

Step 2. Describe Care Consistent with the 4Ms

Using the worksheet provided in Appendix C, describe what it means to provide care consistent with the 4Ms. This worksheet allows you to integrate geriatric best practice interventions to assess, document, and act on the 4Ms together, while customizing your approach for your context. To be considered an Age-Friendly Health System, your system must explicitly describe how it will engage or assess people ages 65 and older for all 4Ms, document 4M information, and act on the 4Ms accordingly.

Questions to consider:

- How does your current state compare to the actions outlined in the 4Ms 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, and screen for mobility for each older adult?
- Where are there gaps in 4Ms? What ideas do you have to fill the gaps?

In this step, describe the initial version of 4Ms care for the older adults you serve.

Set an Aim

Given your current state, set an aim for this initial effort. 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 ORGANIZATION] will articulate how it operationalizes 4Ms care and will have provided that 4Ms care to [NUMBER] patients 65+ years old.

Step 3. Design or Adapt Your Workflow

There are many ways to improve care for older adults. However, there is a finite set of key actions, summarized in below, that touch on all 4Ms and dramatically improve care when implemented together (see Table 5). This list of actions is considered the gateway to your journey to becoming an Age-Friendly Health System. In Appendix D you will find a list of these key actions and ways to get started with each one in your setting, as well as additional tips and resources. Be sure to plan how you will document and make visible the 4Ms across the care team and settings.

Many ideas you may have in place already. You can continue, improve, and expand them where necessary. Other ideas you still may need to test and implement. The key is to ensure these practices are reliable — happening every time in every setting for every older adult and their caregivers you serve.

Table 5. Age-Friendly Health Systems Summary of Key Actions

	Assess	Act On
	Know about the 4Ms for each older adult in your care	Incorporate the 4Ms into the plan of care
Hospital	Key Actions (to occur at least daily):	
	<ul style="list-style-type: none"> • Ask the older adult What Matters • Document What Matters • Review for high-risk medication use • Screen for delirium at least every 12 hours • Screen for mobility limitations 	<ul style="list-style-type: none"> • Align the care plan with What Matters • Deprescribe or do not prescribe high-risk medications • Ensure sufficient oral hydration • Orient older adults to time, place, and situation • Ensure older adults have their personal adaptive equipment • Prevent sleep interruptions; use non-pharmacological interventions to support sleep • Ensure early, frequent, and safe mobility
Ambulatory	Key Actions (to occur at least annually or on change in condition):	
	<ul style="list-style-type: none"> • Ask the older adult What Matters • Document What Matters • Review for high-risk medication use • Screen for dementia • Screen for depression • Screen for mobility limitations 	<ul style="list-style-type: none"> • Align the care plan with What Matters • Deprescribe or do not prescribe high-risk medications • Consider further evaluation and manage manifestations of dementia, or refer • Identify and manage factors contributing to depression • Ensure safe mobility

Supporting Actions:

- Use the 4Ms to organize care and focus on the older adult, wellness, and their strengths rather than solely on disease or on lack of functionality.
- Integrate the 4Ms into care or existing workflows.
- Identify what activities you can stop doing to reallocate resources for the 4Ms and when the 4Ms are reliably in practice.
- Document all 4Ms and consider grouping the 4Ms together in the medical record.
- Make the 4Ms visible across the care team and settings.
- Have an interdisciplinary care team that reviews the 4Ms in daily huddles and/or rounds.
- Educate older adults, caregivers, and the community about the 4Ms.
- Link the 4Ms to community resources and supports to achieve improved health outcomes.

Overall, look for opportunities to combine or redesign activities, processes, and workflows around the 4Ms. In this effort you may find you can stop certain activities and reallocate resources to support age-friendly care.

If you have process flow diagrams or value-stream maps of your daily care, edit these views of your workflow to include the key actions above and your description of age-friendly care.

You may start with a high-level workflow like the examples shown below (see Figures 4 and 5).

Figure 4. Age-Friendly Care Workflow Example for Hospitals: Core Functions

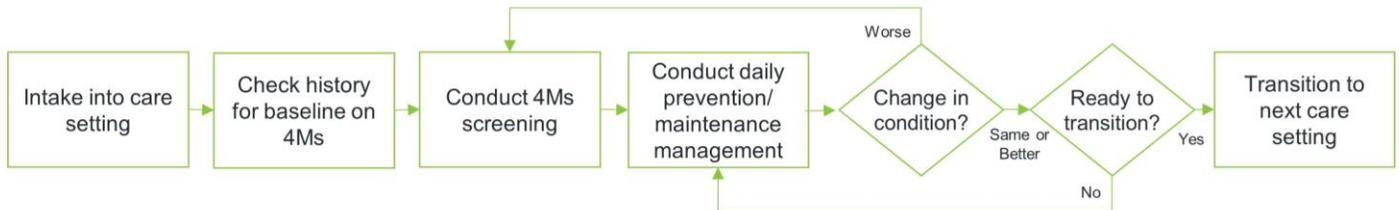
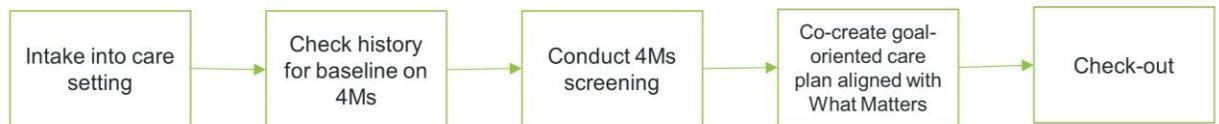


Figure 5. Age-Friendly Care Workflow Example for Primary Care: Core Functions for New Patient, Annual Visit, or Change in Health Status



Then work through the details in the space below each high-level block to show how you will incorporate the 4Ms. Be specific about who will do what, where, when, how, and how it will be documented. Examples are included in Appendix E.

Outline what you still need to learn and identify what you will test (e.g., using the Timed Up & Go Test to evaluate mobility and fall risk).

Step 4. Provide Care

Learn as you move toward reliable 4Ms care. Begin to test the key actions with one older adult and their family caregivers as soon as you have notes for step 2, Describe Care Consistent with the 4Ms, and step 3, Design or Adapt Your Workflow. Do not wait to have your forms or EHR screens finalized before you test with one older adult. Use the [Plan-Do-Study-Act](#) tool to learn more from your tests. Then, scale up your tests. For example:

- Apply your draft standard procedure and workflow first with one patient. Can your team follow the procedure in your work environment?
- If necessary, modify your procedure. Then, apply it with five patients. What lessons do you learn from applying 4Ms care with these patients? What impact does learning about all 4Ms have on care plans?

- If necessary, modify your procedure. Then, apply with 25 patients and keep going. Are you getting close to being able to use your procedure for every patient? Are you getting good results?
- Examples of PDSA cycles can be found in Appendix F.

Step 5. Study Your Performance

How reliable is your 4Ms care? What impact does your 4Ms care have? Here are the basic ingredients to study your performance.

Observe and Seek to Understand

Observe: Start your study with direct observation of your draft 4Ms care description in action.

- Can your team follow the description and successfully assess and act on the 4Ms with the older adults in your care?
- Do care plans reflect 4Ms care?

In the first month, do this for at least one patient each week. Then, for the next six months, observe 4Ms care for at least five patients each month.

Ask Your Team: At least once per month for the seven months of your efforts, ask your team two open-ended questions and reflect on the answers:

- What are we doing well to assess and act on the 4Ms?
- What do we need to change to translate the 4Ms into more effective care?

Ask Your Older Adults and Caregivers: Ask two open-ended questions of an older adult and family caregiver 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?

Test these questions with at least one older adult and family caregiver in your first month. Then try the questions with five additional older adults in the second month. Plan with your team how and when you will continue to talk with older adults using open-ended questions on an ongoing basis.

Measure How Many Patients Receive 4Ms Care

There are three options to start measuring the number of patients receiving 4Ms care. We recommend Option 1 because it forces close attention to the 4Ms work and takes less effort than conducting retrospective chart audits or building a specific EHR report.

Option 1: Real-Time Observation

Use real-time observation and staff reporting of the work to tally your 4Ms counts on a white board or paper. An example for patients seen in the primary care clinic might look like the chart below (see Figure 6).

Figure 6. Example of Real-Time Observation in a Primary Care Clinic

Date	4Ms Care according to our site description					
	All 4Ms	What Matters	Medications	Depression	Dementia	Mobility
Pt ID	if N, check details					
101	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
103	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
105	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
107	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
109	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
111	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
113	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
115	Y N	Y N	Y N	Y N	Y N	Y N

Option 2: Chart Review

Using a tally sheet like example discussed in Option 1, review charts for evidence of 4Ms care. At the start of your work using the 4Ms, review charts of patients with whom you have tested 4Ms care to confirm proper documentation. To estimate the number of patients receiving 4Ms care in a particular time period, randomly sample 20 charts from patients who received care during that time. Calculate the approximate number of patients receiving 4Ms care in the time period as follows:

- Estimated number of patients receiving 4Ms care = Number of patients receiving care in our unit x Number of charts aligned with 4Ms description/20

Option 3: EHR Report

You may be able to run EHR reports, especially on assessment of the 4Ms, to estimate the number of patients 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 can request report development by your IT service while starting with Option 1 or 2.

Routine Counting of Patients

Once your site provides 4Ms care with high reliability (see Appendix G), then the estimate of number of patients receiving 4Ms care is simple: Report the volume of patients receiving care from your site during the measurement period.

Additional Measurement Recommendations

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

Step 6. Improve and Sustain Care

For more information about how to sustain your 4Ms care, please see the IHI White Paper, [Sustaining Improvement](#).

Reminder: Integrating the 4Ms as a Cycle

While we present the steps as a sequence, in practice steps 2 through 6 are a cycle aligned with the Plan-Do-Study-Act method. As you establish your age-friendly care, you may cycle through steps 2 through 6 many times over the course of several months in order to achieve a level of reliability and then turn your efforts to sustainability and monitoring (quality control) over time.

Appendix A: Age-Friendly Health Systems Advisory Groups and Faculty

Age-Friendly Health Systems Advisory Group

- **Ann Hendrich, PhD, RN (co-chair)**, Senior Vice President and Chief Quality/Safety and Nursing Officer, Ascension
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Appendix B: Process Walk-Through: Know the 4Ms in Your 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 (“act on”). The aim in an Age-Friendly Health System is to reliably assess and act on the 4Ms with all older adults. Just about all systems are integrating some of the 4Ms into care, some of the time, with some older adults, in some place in their systems. The work now is to understand where that is happening and build on that good work so that all 4Ms occur reliably for all older adults in all care settings.

How do you already assess and act on each of the 4Ms in your setting? One way is to spend time in your unit, your practice, or your hospital observing the care. As you do, note your observations to the questions below as you learn more about how the 4Ms are already in practice in your system.

- 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 system?
- Where is the prompt or documentation available in the electronic health record or elsewhere for all clinicians and the care team? Is there a place to see the 4Ms (individually or together) across 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?
- Do your current 4Ms activities and services appear to be having a positive impact on older adults and/or family caregivers? Do you have a way to hear about the older adults’ experience?
- Do your current 4Ms activities and services appear to be having a positive impact on the clinicians and staff?
- Which languages do the older adults and their family caregivers speak? Read?
- Do the health literacy levels, language skills, and cultural preferences of your patients match the assets of your team and the resources provided by your health system?
- What works well?
- What could be improved?

4Ms	Specifically, Look for How Do We...	Current Practice and Observations
<p>What Matters: Know and align care with each older adult’s specific health outcome goals and care preferences including, but not limited to end-of-life, and across settings of care</p>	<ul style="list-style-type: none"> • Ask the older adult What Matters most, document it, and share What Matters across the care team • Align the care plan with What Matters most 	
<p>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</p>	<ul style="list-style-type: none"> • Review for high-risk medication use and document it • Deprescribe or avoid high-risk medications, and document and communicate changes 	
<p>Mentation: Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care</p>	<p>Hospital:</p> <ul style="list-style-type: none"> • Screen for delirium at least every 12 hours and document the results • Ensure sufficient oral hydration • Orient to time, place, and situation • Ensure older adults have their personal adaptive equipment • Support non-pharmacological sleep <p>Ambulatory:</p> <ul style="list-style-type: none"> • Screen for dementia/cognitive impairment and document the results • Screen for depression and document the results • Consider further evaluation and manage manifestations of dementia, educate older adults and caregivers, and/or refer out • Identify and manage factors contributing to depression, and/or refer out 	
<p>Mobility: Ensure that each older adult moves safely every day to maintain function and do What Matters</p>	<ul style="list-style-type: none"> • Screen for mobility limitations and document the results • Ensure early, frequent, and safe mobility 	

Appendix C: 4Ms Age-Friendly Care Description Worksheets

Hospital 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 people ages 65 and older for all 4Ms (What Matters, Medication, Mentation, Mobility), document 4Ms information, and act on the 4Ms accordingly.

Health System Name:

Key Contact:

Name of Hospital:

Site of Care:

- Hospital-wide
- Specialty Unit (e.g., ACE)
- General Medical/Surgical Unit
- Other

If Specialty Unit or Other, please describe:

	What Matters	Medication	Mentation	Mobility
	<input type="checkbox"/> Daily <input type="checkbox"/> Other: _____ <i>Minimum frequency is once per stay.</i>	<input type="checkbox"/> Daily <input type="checkbox"/> Other: _____ <i>Minimum frequency is once per stay.</i>	<input type="checkbox"/> Other: _____ <i>Minimum frequency is every 12 hours.</i>	<input type="checkbox"/> Daily <input type="checkbox"/> Other: _____ <i>Minimum frequency is once per stay.</i>
Documentation Please check the “EHR” (electronic health record) box or fill in the blank for “Other.”	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is EHR. If “Other,” will review to ensure documentation method is accessible to other care team members for use during the hospital stay.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is EHR. If “Other,” will review to ensure documentation method is accessible to other care team members for use during the hospital stay.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is EHR. If “Other,” will review to ensure documentation method can capture assessment to trigger appropriate action.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is EHR. If “Other,” will review to ensure documentation method can capture assessment to trigger appropriate action.</i>
Act On Please describe how you use the information obtained from Engage/Screen/Assess to design and provide care. Refer to pathways or procedures that are meaningful to your staff in the “Other” field.	<input type="checkbox"/> Align the care plan with What Matters most <input type="checkbox"/> Other: _____ <i>Minimum requirement: First box must be checked.</i>	<input type="checkbox"/> Deprescribe (includes both dose reduction and medication discontinuation) <input type="checkbox"/> Pharmacy consult <input type="checkbox"/> Other: _____ <i>Minimum requirement: At least one box must be checked.</i>	Delirium prevention and management protocol including, but not limited to: <input type="checkbox"/> Ensure sufficient oral hydration <input type="checkbox"/> Orient older adult to time, place, and situation on every nursing shift <input type="checkbox"/> Ensure older adult has their personal adaptive equipment (e.g., glasses, hearing aids, dentures, walkers) <input type="checkbox"/> Prevent sleep interruptions; use non-	<input type="checkbox"/> Ambulate 3 times a day <input type="checkbox"/> Out of bed or leave room for meals <input type="checkbox"/> PT intervention (balance, gait, strength, gate training, exercise program) <input type="checkbox"/> Avoid restraints <input type="checkbox"/> Remove catheters and other tethering devices <input type="checkbox"/> Avoid high-risk medications

	What Matters	Medication	Mentation	Mobility
			pharmacological interventions to support sleep <input type="checkbox"/> Avoid high-risk medications <input type="checkbox"/> Other: _____ <i>Minimum requirement: First five boxes must be checked.</i>	<input type="checkbox"/> Other: _____ <i>Minimum requirement: Must check first box and at least one other box.</i>
Primary Responsibility Indicate which care team member has primary responsibility for the older adult.	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>

Ambulatory Care 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 people ages 65 and older for all 4Ms (What Matters, Medication, Mentation, Mobility), document 4Ms information, and act on the 4Ms accordingly.

Health System Name:

Key Contact:

Site of Care:

Site of Care:

- Primary Care Practice
- Specialty Practice (e.g., geriatric service)
- Other

If Specialty Practice or Other, please describe:

	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
			<i>Optional:</i> Check the tool used for functional assessment: <input type="checkbox"/> Barthel Index of ADLs (in EPIC) <input type="checkbox"/> Lawton IADLs <input type="checkbox"/> Katz ADL <input type="checkbox"/> Other: _____		
Frequency	<input type="checkbox"/> Annually <input type="checkbox"/> Other: _____ <i>Minimum frequency is annually.</i>	<input type="checkbox"/> Annually <input type="checkbox"/> At change of medication <input type="checkbox"/> Other: _____ <i>Minimum frequency is annually.</i>	<input type="checkbox"/> Annually <input type="checkbox"/> Other: _____ <i>Minimum frequency is annually.</i>	<input type="checkbox"/> Annually <input type="checkbox"/> Other: _____ <i>Minimum frequency is annually.</i>	<input type="checkbox"/> Annually <input type="checkbox"/> Other: _____ <i>Minimum frequency is annually.</i>
Documentation Please check the "EHR" box (electronic health record) or fill in the blank for "Other."	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method is accessible to other care team members for use during care.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method is accessible to other care team members for use during care.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method can capture assessment to trigger appropriate action.</i>	<input type="checkbox"/> EHR <input type="checkbox"/> Other: _____ <i>One box must be checked; preferred option is "EHR." If "Other," will review to ensure documentation method can capture mobility status in a way that other care team members can use.</i>

	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
<p>Act On</p> <p>Please describe how you use the information obtained from Engage/Screen/Assess to design and provide care. Refer to pathways or procedures that are meaningful to your staff in the “Other” field.</p>	<p><input type="checkbox"/> Align the care plan with What Matters most</p> <p><input type="checkbox"/> Other: _____</p> <p><i>Minimum requirement: First box must be checked.</i></p>	<p><input type="checkbox"/> Educate older adult and family caregivers</p> <p><input type="checkbox"/> Deprescribe (includes both dose reduction and medication discontinuation)</p> <p><input type="checkbox"/> Refer to: _____</p> <p><input type="checkbox"/> Other: _____</p> <p><i>Minimum requirement: At least one box must be checked.</i></p>	<p><input type="checkbox"/> Share results with older adult</p> <p><input type="checkbox"/> Provide educational materials to older adult and family caregivers</p> <p><input type="checkbox"/> Refer to community organization for education and/or support</p> <p><input type="checkbox"/> Refer to: _____</p> <p><input type="checkbox"/> Other: _____</p> <p><i>Minimum requirement: Must check first box and at least one other box.</i></p>	<p><input type="checkbox"/> Educate older adult and family caregivers</p> <p><input type="checkbox"/> Prescribe anti-depressant</p> <p><input type="checkbox"/> Refer to: _____</p> <p><input type="checkbox"/> Other: _____</p> <p><i>Minimum requirement: At least one of the first three boxes must be checked.</i></p>	<p><input type="checkbox"/> Multifactorial fall prevention protocol (e.g., STEADI)</p> <p><input type="checkbox"/> Educate older adult and family caregivers</p> <p><input type="checkbox"/> Manage impairments that reduce mobility (e.g., pain, balance, gait, strength)</p> <p><input type="checkbox"/> Ensure safe home environment for mobility</p> <p><input type="checkbox"/> Identify and set a daily mobility goal with older adult that supports What Matters; review and support progress toward the goal</p> <p><input type="checkbox"/> Avoid high-risk medications</p> <p><input type="checkbox"/> Refer to PT</p> <p><input type="checkbox"/> Other: _____</p> <p><i>Minimum requirement: Must check the first box or at least 3 of the remaining boxes.</i></p>

	What Matters	Medication	Mentation: Dementia	Mentation: Depression	Mobility
<p>Primary Responsibility</p> <p>Indicate which care team member has primary responsibility for the older adult.</p>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>	<input type="checkbox"/> Nurse <input type="checkbox"/> Clinical Assistant <input type="checkbox"/> Social Worker <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Other: _____ <i>Minimum requirement: One role must be selected.</i>

Appendix D: Key Actions and Getting Started with Age-Friendly Care

Hospital-Based Care

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
<p>Ask the older adult What Matters</p>	<p>If you do not have existing questions to start this conversation, try the following, and adapt as needed:</p> <p><i>“What do you most want to focus on while you are in the hospital/emergency department for _____ (fill in health problem) so that you can do _____ (fill in desired activity) more often or more easily?”^{2,3,4}</i></p> <p>For older adults with advanced or serious illness, consider:</p> <p><i>“What are your most important goals if your health situation worsens?”⁵</i></p>	<p>Tips</p> <ul style="list-style-type: none"> • 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 <i>who</i> matters to the patient. Then ask the patient 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 <i>what</i> matters becomes much 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 caregivers 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 they are suffering least from delirium symptoms. <p>Additional Resources</p> <ul style="list-style-type: none"> • “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
Document What Matters	Documentation can be on paper, on a whiteboard, or in the electronic health record (EHR) where it is accessible to the whole care team across settings. ⁶	<p>Tips</p> <ul style="list-style-type: none"> • Convert 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 caregiver names and phone numbers). Identify who on the care team is responsible for ensuring it is updated. • Consider documentation of What Matters to the older adult on paper that they can bring to appointments and other sites of care. • Identify where health and health care goals and priorities can be captured in your EHR and available across care teams and settings. • Review What Matters documentation across older adult patients to ensure they are specific to each person (i.e., watch for generic or the same answer across all patients, which suggests a deeper discussion of What Matters is warranted). <p>Additional Resources</p> <ul style="list-style-type: none"> • “What Matters to You?” Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)
Review for high-risk medication use	Specifically, look for: <ul style="list-style-type: none"> • Benzodiazepines • Opioids • Highly-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics^{7,8,9} 	<p>Tips</p> <ul style="list-style-type: none"> • If you select to limit the number of medications to focus on, identify those most frequently dispensed in your hospital or unit, or those for whom there is a champion to deprescribe. <p>Additional Resources</p> <ul style="list-style-type: none"> • American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults • AGS 2019 Beers Criteria Pocketcard • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
<p>Screen for delirium at least every 12 hours</p>	<p>If you do not have an existing tool, try using Ultra-Brief 2-Item Screener (UB-2).^{10,11}</p>	<p>Tips</p> <ul style="list-style-type: none"> • Decide on the tool that best fits your care team culture. • Be aware that low prevalence rates of delirium before the 4Ms are in place may indicate inaccurate use of a screening or assessment tool. • It is critical to use any tool only as instructed and to do ongoing training (yearly competency) to make sure it is being used correctly. • Ask questions in a way that emphasizes the 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 caregivers 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 their loved one seems "like themselves." • Document mental status in the chart to measure changes shift-to-shift. • Until ruled out, consider a change in mental status to be delirium and raise awareness among care team and family caregivers about the risk of delirium superimposed on dementia. • Note: Delirium has an underlying cause and is preventable and treatable in most cases. Care teams need to: <ol style="list-style-type: none"> 1. Remove or treat underlying cause(s) if it occurs 2. Restore or maintain function and mobility 3. Understand delirium behaviors 4. Prevent delirium complications <p>Additional Resources</p> <ul style="list-style-type: none"> • Confusion Assessment Method (CAM) and its variations: 3D-CAM for medical-surgical units, CAM-ICU for intensive care units, bCAM for emergency departments • Nursing Delirium Screening Scale (Nu-DESC) • Hospital Elder Life Program (HELP) • www.idelirium.org
<p>Screen for mobility limitations</p>	<p>If you do not have an existing tool, try using the Timed Up & Go (TUG).^{12,13}</p>	<p>Tips</p> <ul style="list-style-type: none"> • Recognize that 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.

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
		<p>Additional Resources</p> <ul style="list-style-type: none"> • Get Up and Go¹⁴ and demonstration video • Johns Hopkins – Highest Level of Mobility (JH-HLM) Scale • Performance-Oriented Mobility Assessment (POMA)¹⁵

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
<p>Align the care plan with What Matters</p>	<p>Incorporate What Matters in the goal-oriented plan of care and align the care plan with the older adult's goals and preferences^{16,17,18} (i.e., What Matters).</p>	<p>Tips</p> <ul style="list-style-type: none"> • Health outcome goals are the activities that matter most to an individual, such as babysitting 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 patient's priorities, Medication, Mentation, and Mobility usually come up so the patient can do more of What Matters. • Consider how care while in the hospital can be modified to align with What Matters. • Consider What Matters to the older adult when deciding to where they will be discharged. • 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, I suggest we..." • Use the patient's priorities (not just diseases) in communicating, decision making, and assessing benefits. • Use collaborative negotiations; agree there is no best 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, and so on).

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
		<p>Additional Resources</p> <ul style="list-style-type: none"> • “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)
<p>Deprescribe or do not prescribe high-risk medications**</p>	<p>Specifically avoid or deprescribe the high-risk medications listed below.</p> <ul style="list-style-type: none"> • Benzodiazepines • Opioids • High-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics^{19,20,21,22} <p>If the older adult takes one or more of these medications, discuss any concerns the patient may have, assess for adverse effects, and discuss deprescribing with the older adult.²³</p>	<p>Tips</p> <ul style="list-style-type: none"> • These medications, individually and in combination, may interfere with What Matters, Mentation, and safe Mobility of older adults because they increase the risk of confusion, delirium, unsteadiness, and falls²⁴. • Deprescribing includes both dose reduction and medication discontinuation. • Deprescribing is a positive, patient-centered approach, requiring informed patient consent, shared decision making, close monitoring, and compassionate support. • When possible, avoid prescribing these high-risk medications (prevention); consider changing order sets in the her to change prescribing patterns (e.g., adjust/reduce doses, change medications available). • Your institution should have delirium and fall prevention and management protocols that includes 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 sustained. Remove medications the older adult can stop taking upon discharge. • Include a medication list printout as part of standard check-out steps and ensure that the older adult and family caregivers understand what their 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. • Inform the patient’s ambulatory clinicians of medication changes. • Consult pharmacy. • When instituting an age-friendly approach to medications: <ul style="list-style-type: none"> ○ Identify who on your team is going to be the champion of this “M.” The champion may not be a pharmacist, but it is vital to have a pharmacist or physician, as well as a patient, work on the plan. ○ 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 medications (e.g., anticholinergics). ○ Determine your goal(s) with respect to your medication(s) identified in the previous step.

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
		<ul style="list-style-type: none"> ○ Conduct a series of PDSA cycles to achieve your goal(s). <p>Additional Resources</p> <ul style="list-style-type: none"> • deprescribing.org • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines • 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
Ensure sufficient oral hydration**	Identify a target amount of oral hydration appropriate for the older adult and monitor to confirm it is met.	<p>Tips</p> <ul style="list-style-type: none"> • Ensure water and other patient-preferred, noncaffeinated fluids are available at the bedside and accessible to the older adult. • The focus here is on oral hydration so that the patient is not on an IV that may interfere with Mobility. • Your institution should have a delirium prevention and management protocol that includes oral hydration. • Replace pitchers with straw water bottles for easier use by older adults.
Orient older adults to time, place, and situation**	<p>Make sure day and date are updated on the whiteboard.</p> <p>Provide an accurate clock with large face visible to older adults.</p> <p>Consider the use of tools such as an “All About Me” board or poster/card that shows what makes the older adults calm and happy, who is important to them, names of pets, etc.</p>	<p>Tips</p> <ul style="list-style-type: none"> • For older adults with dementia, consider gentle re-orientation or use of orienting cues; avoid repeated testing about the orientation if the older adult appears agitated.²⁵ • Conduct orientation during every nursing shift. • Your institution should have a delirium prevention and management protocol that includes orientation. • Identify person-centered environmental and personal approaches to orienting the older adult

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
	<p>Make newspapers and other periodicals available in the patient's room.</p> <p>Invite family caregivers to bring familiar and orienting items from home (e.g., family pictures).</p>	
Ensure older adults have their personal adaptive equipment**	<p>Incorporate routine intake and documentation of the older adults' personal adaptive equipment.</p> <p>At the beginning of each shift, check for sensory aides and offer to clean them. If needed, offer the older adults a listening device or hearing amplifier from the unit.</p>	<p>Tips</p> <ul style="list-style-type: none"> • This includes equipment such as glasses, hearing aids, dentures, and walkers. • Your institution should have a delirium prevention and management protocol that includes this action. • Note use of personal adaptive equipment on the whiteboard. • Confirm need for personal adaptive equipment with family caregivers.
Prevent sleep interruptions; use non-pharmacological interventions to support sleep**	<p>Avoid overnight vital checks and blood draws unless absolutely necessary.</p> <p>Create and use sleep kits.^{26,27} 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, outline actions such as no caffeine after 11 AM or promote physical activity). These can be placed in a box on the unit to use in patient rooms as needed.</p>	<p>Tips</p> <ul style="list-style-type: none"> • 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 institution should have a delirium prevention and management protocol that includes non-pharmacological sleep support. • Make a sleep kit available for order in the EHR. • Engage family caregivers to support sleep with methods that are familiar to the older adult.

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
<p>Ensure early, frequent, and safe mobility**^{28,29,30}</p>	<p>Ambulate three times a day.</p> <p>Set and meet a daily mobility goal with each older adult.</p> <p>Get patients out of bed or have them leave the room for meals.</p>	<p>Tips</p> <ul style="list-style-type: none"> • Assess and manage impairments that reduce mobility; for example: <ul style="list-style-type: none"> ○ Manage pain ○ Assess impairments in strength, balance, or gait ○ Remove catheters, IV lines, telemetry, and other tethering devices as soon as possible ○ Avoid restraints ○ Avoid sedatives and drugs that immobilize the older adult • Refer to physical therapy; have physical therapy interventions to help with balance, gait, strength, gait training, or an exercise program if needed • Your institution should have a delirium prevention and management protocol that includes mobility. • Engage the older adult and family caregivers directly by offering exercises that can be done in bed (e.g., put appropriate exercises on a placemat that remains in the room). <p>Additional Resources</p> <ul style="list-style-type: none"> • Hospital Elder Life Program (HELP) Mobility Change Package and Toolkit

**These activities are also key to preventing delirium³¹ and falls.

Ambulatory/Primary Care

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
<p>Ask the older adult What Matters</p>	<p>If you do not have existing questions to start this conversation, try the following, and adapt as needed.</p> <p><i>“What is the one thing about your health or health care you most want to focus on related to _____ (fill in health problem OR the health care task) so that you can do _____ (fill in desired activity) more often or more easily?”^{32,33,34}</i></p> <p>For older adults with advanced or serious illness, consider:</p> <p><i>“What are your most important goals if your health situation worsens?”³⁵</i></p>	<p>Tips</p> <ul style="list-style-type: none"> • This action focuses clinical encounters, decision making, and care planning on What Matters most to 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 <i>who</i> matters to the patient. Then ask the patient 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 <i>what</i> matters becomes much 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 caregivers in a discussion about What Matters; however, it is important to also ask the older adult individually. • Ask people with dementia What Matters. • Integrate asking What Matters into the Welcome to Medicare and Medicare Annual Wellness Visit. • You may include What Matters questions in pre-visit paperwork and verify the answers during the visit. <p>Additional Resources</p> <ul style="list-style-type: none"> • “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) • End-of-Life Care Conversations: Medicare Reimbursement FAQs

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
Document What Matters	Documentation can be on paper or in the electronic health record (EHR) where it is accessible to the whole care team across settings ³⁶	<p>Tips</p> <ul style="list-style-type: none"> • Identify where health and health care goals and priorities can be captured in your EHR and available across care teams and settings. • Consider documentation of What Matters to the older adult on paper that they can bring to appointments and other sites of care. • Invite older adults to enter What Matters to them on your patient portal. <p>Additional Resources</p> <ul style="list-style-type: none"> • My Story for Family Caregivers • Community Library for your EHR • "What Matters to You?" Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)
Review for high-risk medication use	<p>Specifically, look for:</p> <ul style="list-style-type: none"> • Benzodiazepines • Opioids • Highly-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics^{37,38,39} 	<p>Tips</p> <ul style="list-style-type: none"> • Consider this review a medication risk assessment and be sure to include over-the-counter medications at least annually. • Engage the older adult and family caregiver in providing all medications (including over-the-counter medicines) for review. • Medicare beneficiaries may be eligible for an annual comprehensive medication review. • Medication reconciliation, part of the Medicare Annual Wellness Visit, may be an important step in identifying high-risk medications. <p>Additional Resources</p> <ul style="list-style-type: none"> • American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults • AGS 2019 Beers Criteria Pocketcard • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines • Medicare Interactive, Annual Wellness Visit • CDC Medication Personal Action Plan • CDC Personal Medicines List
Screen for dementia / cognitive impairment	If you do not have an existing tool, try using the Mini-Cog ⁴⁰	<p>Tips</p>

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
		<ul style="list-style-type: none"> • Normalize cognitive screening for patients. For example, say “I’m going to assess your 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 have a baseline cognitive screen. • If they have a sudden change (day, weeks) in cognition, consider and rule-out delirium. • Screening for cognitive impairment is part of Welcome to Medicare and Medicare Annual Wellness Visit. <p>Additional Resources</p> <ul style="list-style-type: none"> • Saint Louis University Mental Status (SLUMS) Exam • Montreal Cognitive Assessment (MoCA)
Screen for depression	If you do not have an existing tool, try using the Patient Health Questionnaire – 2 (PHQ-2) . ⁴¹	<p>Tips</p> <ul style="list-style-type: none"> • Screen if there is concern for depression • Screening for depression is part of Welcome to Medicare and the Medicare Annual Wellness Visit. <p>Additional Resources</p> <ul style="list-style-type: none"> • Patient Health Questionnaire – 9 (PHQ-9) • Geriatric Depression Scale (GDS) and GDS: Short Form
Screen for mobility limitations	If you do not have an existing tool, try using the Timed Up & Go (TUG) . ^{42,43}	<p>Tips</p> <ul style="list-style-type: none"> • Recognize that 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. • Screening for mobility is part of Welcome to Medicare and the Medicare Annual Wellness Visit. • Considering engaging the full care team in assessing mobility. Does the person walk into the waiting room? Are they able to stand up from the waiting room chair when called? Can they walk to the exam room? • Consider also conducting a functional assessment. Common tools include: <ul style="list-style-type: none"> ○ Barthel Index of ADLs (in EPIC) ○ The Lawton Instrumental Activities of Daily Living (IADL) Scale ○ Katz Index of Independence in Activities of Daily Living (ADL)

Assess: Know about the 4Ms for Each Older Adult in Your Care		
Key Actions	Getting Started	Tips and Resources
		<p>Additional Resources</p> <ul style="list-style-type: none"> • Get Up and Go⁴⁴ and demonstration video • Johns Hopkins – Highest Level of Mobility (JH-HLM) Scale • Performance-Oriented Mobility Assessment (POMA)⁴⁵

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
<p>Align the care plan with What Matters</p>	<p>Incorporate What Matters in the goal-oriented plan of care and align the care plan with the older adult’s goals and preferences^{46,47,48} (i.e., What Matters).</p>	<p>Tips</p> <ul style="list-style-type: none"> • Health outcome goals are the activities that matter most to an individual, such as babysitting 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 patient’s priorities, Medication, Mentation (cognition and depression), and Mobility usually come up so the patient can do more of What Matters. • 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, I suggest we...” • Use the patient’s priorities (not just diseases) in communicating, decision making, and assessing benefits. • Use collaborative negotiations; agree there is no best 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, and so on). <p>Additional Resources</p>

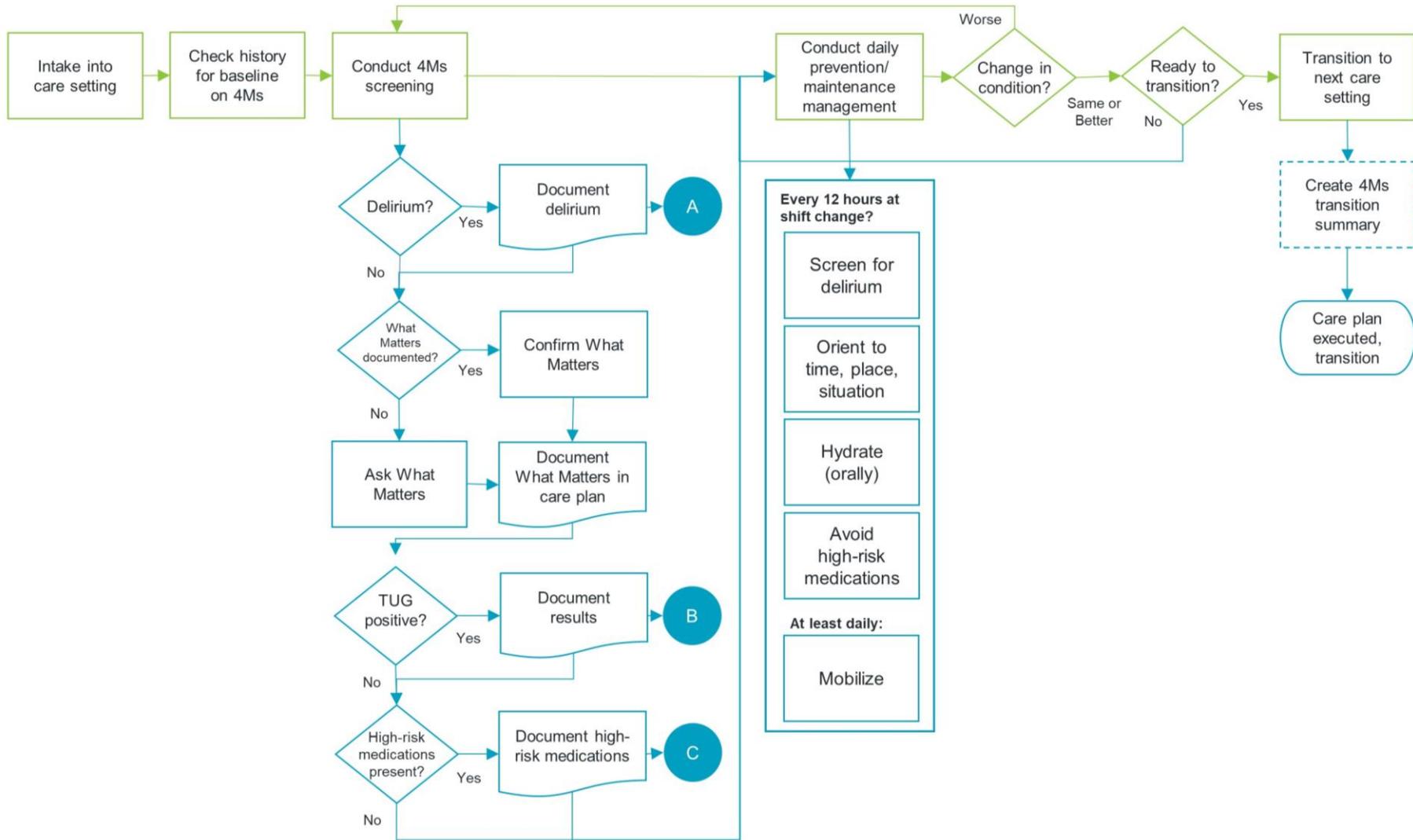
Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
		<ul style="list-style-type: none"> • “What Matters” to Older Adults?: A Toolkit for Health Systems to Design Better Care with Older Adults • Patient Priorities Care • Serious Illness Conversation Guide • “What Matters to You?” Instructional Video and A Guide to Having Conversations about What Matters (BC Patient Safety & Quality Council)
<p>Deprescribe or do not prescribe high-risk medications**</p>	<p>Specifically avoid or deprescribe the high-risk medications listed below:</p> <ul style="list-style-type: none"> • Benzodiazepines • Opioids • High-anticholinergic medications (e.g., diphenhydramine) • All prescription and over-the-counter sedatives and sleep medications • Muscle relaxants • Tricyclic antidepressants • Antipsychotics^{49,50,51,52} <p>If the older adult takes one or more of these medications, discuss any concerns the patient may have, assess for adverse effects, and discuss deprescribing with the older adult.⁵³</p>	<p>Tips</p> <ul style="list-style-type: none"> • These medications, individually and in combination, may interfere with What Matters, Mentation, and safe Mobility of older adults because they increase the risk of confusion, delirium, unsteadiness, and falls.⁵⁴ • Deprescribing includes both dose reduction and medication discontinuation. • Deprescribing is a positive, patient-centered approach, requiring informed patient consent, shared decision making, close monitoring, and compassionate support. • When possible, avoid prescribing these high-risk medications (prevention). Consider changing order sets in the EHR to change prescribing patterns (e.g., adjust/reduce doses or change medications available). • Provide ongoing patient/caregiver education about potentially high-risk medications through all care settings (e.g., outpatient pharmacy) to help improve safe medication use and informed decision making. • Consider community resources to support pain management with non- pharmacological interventions, including referral to community-based resources. • Communicate changes in medications across clinicians and settings of care, and with the primary pharmacy working with the older adult. • When instituting an age-friendly approach to medications: <ul style="list-style-type: none"> ○ Identify who on your team is going to be the champion of this “M.” The champion may not be a pharmacist, but it is vital to have a pharmacist or physician, as well as a patient, work on the plan. ○ 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 medications (e.g., anticholinergics) ○ Determine your goal(s) with respect to your medication(s) identified in the previous step. ○ Conduct a series of PDSA cycles to achieve your goal(s). <p>Additional Resources</p>

Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
		<ul style="list-style-type: none"> • deprescribing.org • Reducing Inappropriate Medication Use by Implementing Deprescribing Guidelines • 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 (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
<p>Consider further evaluation and manage manifestations of dementia, or refer to geriatrics, psychiatry, or neurology</p>	<p>Share the results with the older adult and caregiver.</p> <p>Assess for modifiable contributors to cognitive impairment.</p> <p>Consider further diagnostic evaluation if appropriate.</p> <p>Follow current guidelines for treatment of dementia and resulting behavioral manifestations OR refer to geriatrics, psychiatry, or neurology for management of dementia-related issues.</p> <p>Provide educational materials to the older adult and family caregiver.</p> <p>Refer the older adult, family, and other caregivers to supportive resources, such as the Alzheimer's Association.⁵⁵</p>	<p>Tips</p> <ul style="list-style-type: none"> • Know about and refer older adults and their caregivers to local community-based organizations and resources to support them with education and/or support. • Include family caregivers. They provide a source of information and support. To identify these individuals, ask the older adult, “Who would you go to for help?” and recommend they bring that person to the next visit. • Consider also assessing and managing caregiver burden. • Ensure follow-through on any referrals. • If a memory disturbance is found, avoid medications that will make cognitive health worse. • If there is a diagnosis of dementia, include it on the problem list. If not, include cognitive impairment. • Do not prescribe medications that can exacerbate cognitive impairment, such as benzodiazepines and anticholinergics. • Older adults with dementia will be at high risk of delirium, especially if hospitalized, so educate family and providers on delirium prevention. <p>Additional Resources</p> <ul style="list-style-type: none"> • Alzheimer's Association • Local Area Agency on Aging • Community Resource Finder • Zarit Burden Interview (for caregivers)

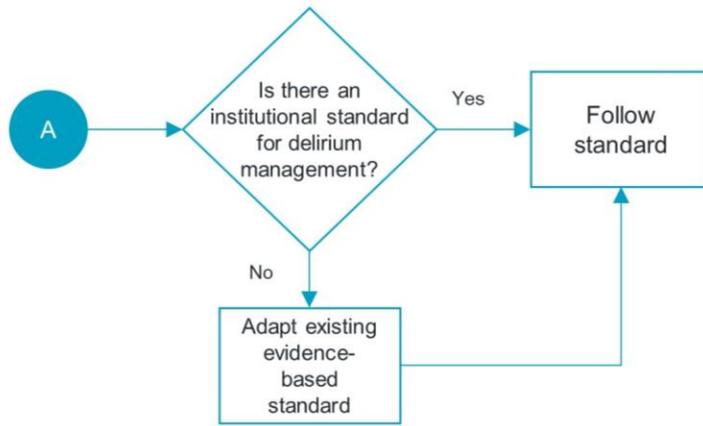
Act on: Incorporate the 4Ms into the Plan of Care		
Key Actions	Getting Started	Tips and Resources
<p>Identify and manage factors contributing to depression</p>	<p>Identify and manage factors that contribute to depressive symptoms, including sensory limitations (vision, hearing), social isolation, losses of aging (job, income, societal roles), bereavement, and medications.</p> <p>Consider the need for counseling and/or pharmacological treatment of depression, or refer to a mental health provider if appropriate.</p>	<p>Tips</p> <ul style="list-style-type: none"> • Educate the patient and caregiver about depression in older adults • Recognize social isolation as a risk factor for depression and identify community-based resources that support social connections. <p>Additional Resources</p> <ul style="list-style-type: none"> • Your local Area Agency on Aging • Crosswalk: Evidence-Based Leadership Council Programs and the 4Ms
<p>Ensure safe mobility^{56,57,58}</p>	<p>Assess and manage impairments that reduce mobility; for example:</p> <ul style="list-style-type: none"> • Manage pain • Assess impairments in strength, balance, or gait • Remove catheters, IV lines, telemetry, and other tethering devices as soon as possible • Avoid high-risk medications <p>Refer to physical therapy.</p> <p>Support older adults, families, and other caregivers to create a home environment that is safe for mobility.⁵⁹</p> <p>Support older adults to identify and set a daily mobility goal that supports What Matters.</p> <p>Review and support progress toward the mobility goal in subsequent interactions.</p>	<p>Tips</p> <ul style="list-style-type: none"> • Have a multifactorial fall prevention protocol (e.g., STEADI) that includes: <ul style="list-style-type: none"> ○ Educating the patient/family ○ Managing impairments that reduce mobility (e.g., pain, balance, gait, strength) ○ Ensuring a safe home environment for mobility ○ Identifying and setting a daily mobility goal with the patient that supports What Matters, and then review and support progress toward the mobility goal ○ Avoiding high-risk medications ○ Referring to physical therapy <p>Additional Resources</p> <ul style="list-style-type: none"> • Stopping Elderly Accidents, Deaths & Injuries (STEADI) • CDC My Mobility Plan

Appendix E: Age-Friendly Care Workflow Examples

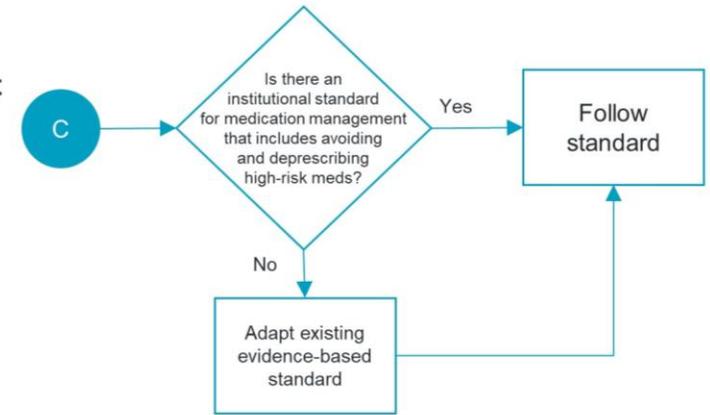
Hospital-Based Care Workflows: Core Functions



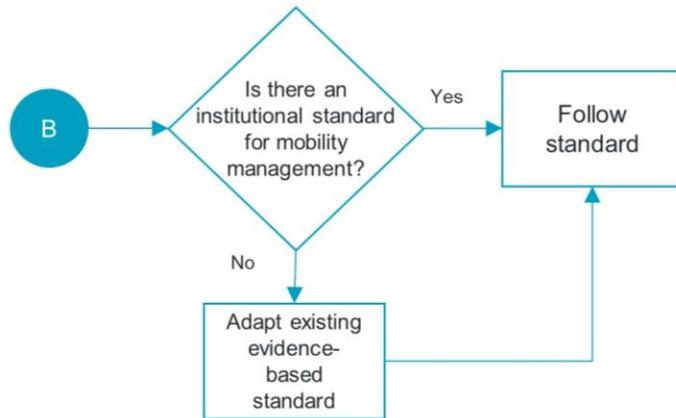
Delirium Workflow



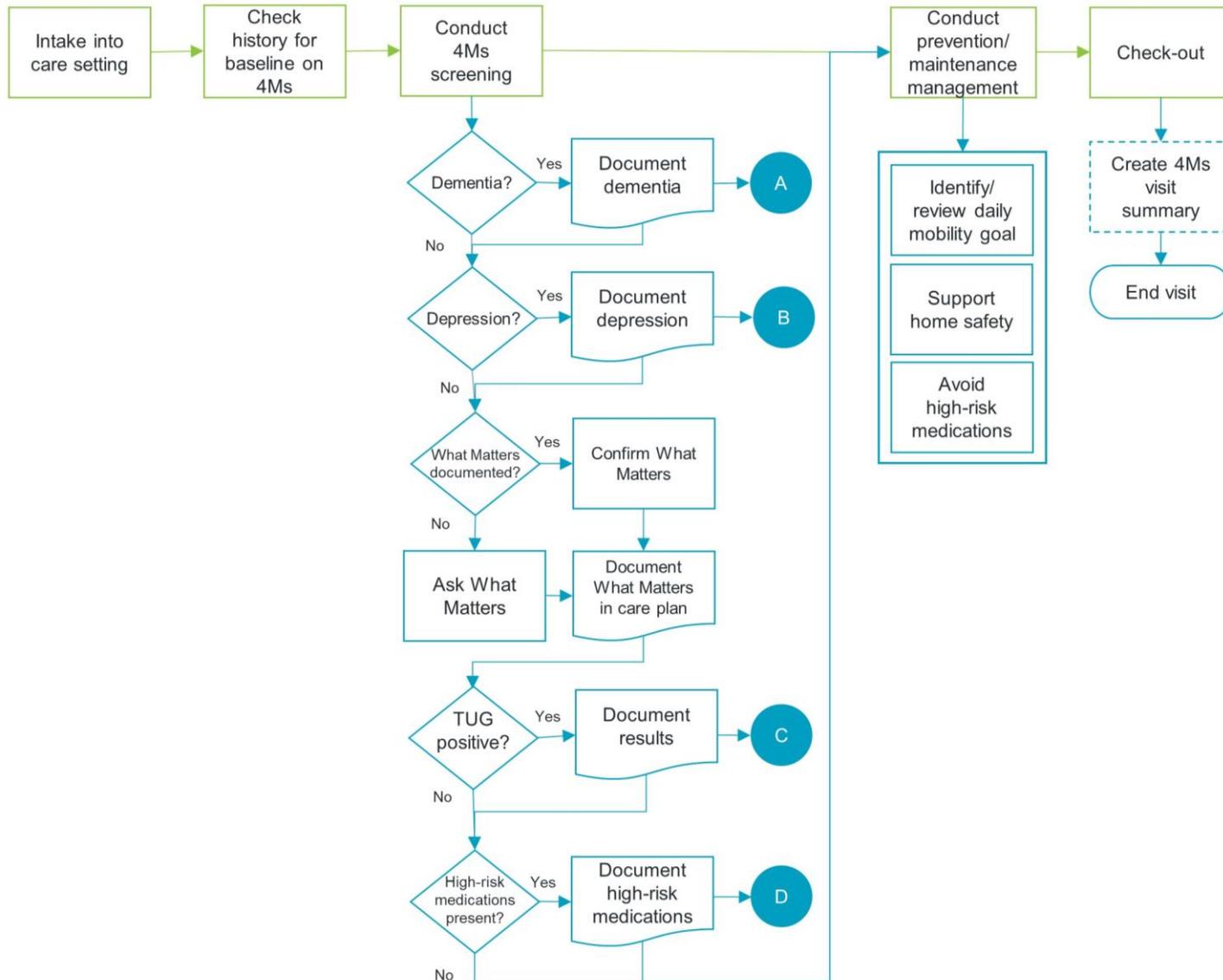
Medication Management Workflow



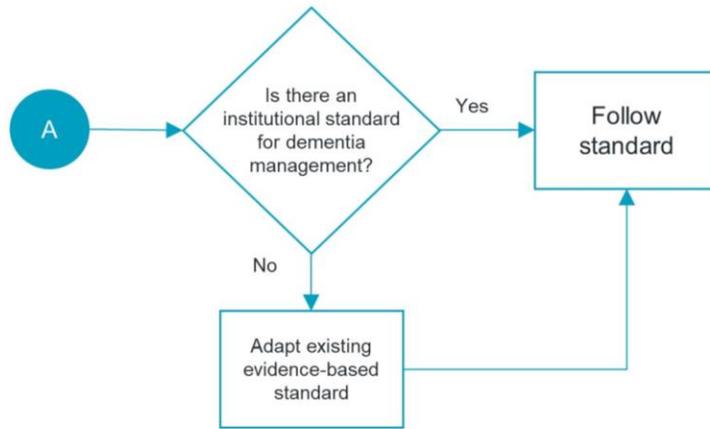
Mobility Workflow



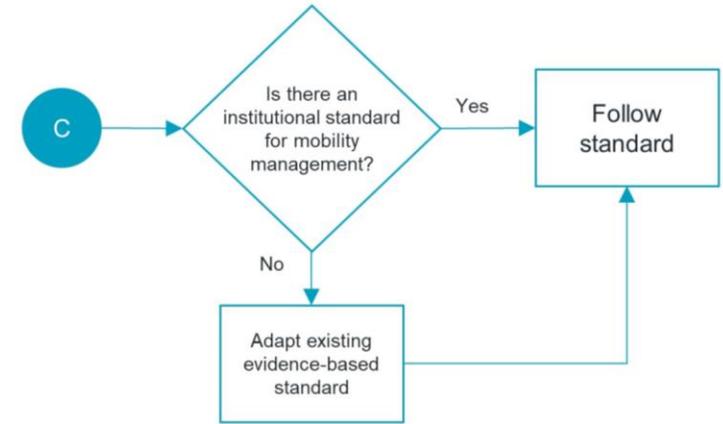
Ambulatory/Primary Care Workflows: Core Functions for New Patient, Annual Visit, or Change in Health Status



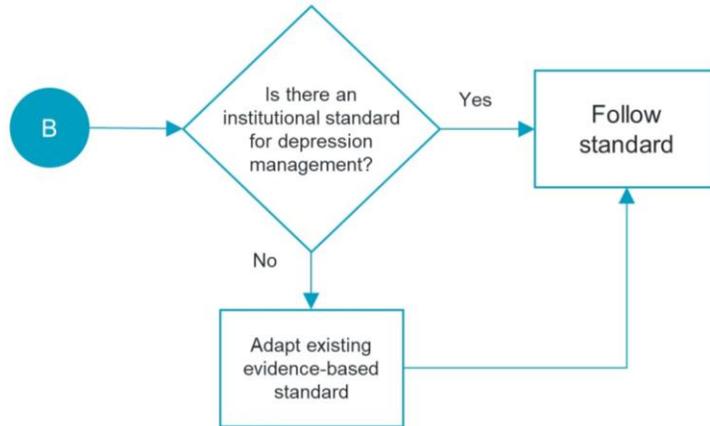
Dementia Workflow



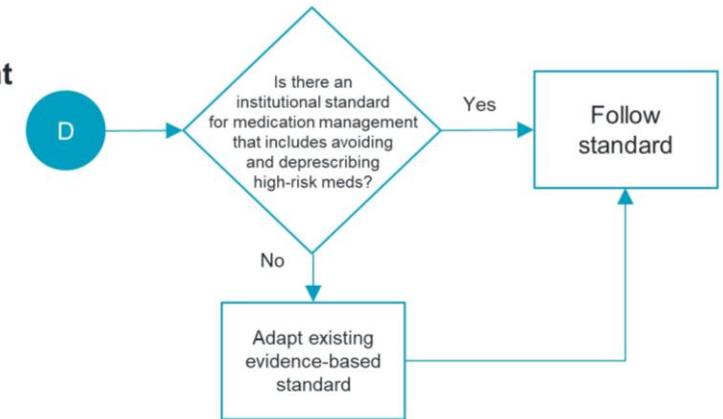
Mobility Workflow



Depression Workflow

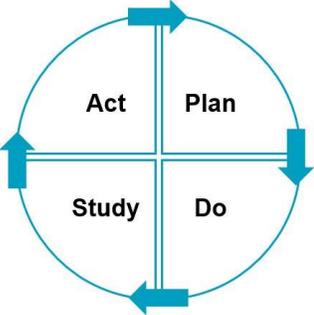


Medication Management Workflow



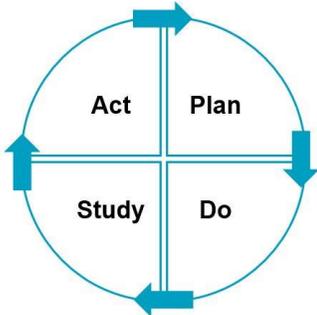
Appendix F: Example PDSA Cycles for Age-Friendly Care

Example: Testing What Matters Engagement with Hospitalized Older Adult Patients

Plan-Do-Study-Act Record	NAME OF HEALTH SYSTEM: Camden University Medical Center NAME OF PERSON COMPLETING FORM: Erin Rush, RN DATE: March 29, 2019		
	Change Idea to ____ develop or <u>X</u> test or ____ implement		
	Description: Cycle 1: Test a What Matters engagement with a hospitalized patient. Essential Ingredients <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;">  <ul style="list-style-type: none"> • Who? • When? • Using what question(s)? </div> <div style="text-align: center;">  <ul style="list-style-type: none"> • Who? • What? • Where? </div> <div style="text-align: center;">  <ul style="list-style-type: none"> • Who? • How do we know if that has happened? </div> </div>		
PLAN:			
Questions: What do we want to know?			
<ul style="list-style-type: none"> • Can physicians incorporate What Matters engagements into rounds with older adult patients? • Will physicians learn something useful from this What Matters engagement relevant to care planning? 			
Predictions: What do we think will happen?			
<ul style="list-style-type: none"> • Physicians can incorporate What Matters engagements into rounds with older adult patients. • Physicians 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	When	Where
Orient Dr. M (hospitalist) to this test	Erin	Monday morning	4 South
Select older adult patient for test	Erin and Dr. M	Monday morning	4 South
Ask older adult patient, "What's important to you in the next few days as you recover from your illness?"	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.
<ul style="list-style-type: none"> • Dr. M asked 1, and then 4 more, older patients — went beyond testing with just 1 patient! • Some answers were very health/condition related (e.g., a patient with shortness of breath/cough stated, “I just want my cough to be better and to be able to breathe.”). • Other answers were more life related, for example: <ul style="list-style-type: none"> ○ A patient 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 patient with multiple falls wants to be able to stand to cook again.
STUDY: Complete analysis of data; summarize what was learned; compare what happened to predictions above.
<ul style="list-style-type: none"> • Asking a single question is not sufficient. Need the opportunity for follow-up questions and listening. For example: A patient with congestive heart failure and arthritis has an immediate goal to reduce swelling in her legs. Further probing revealed a desire to stay in her home and be able to cook to avoid delivered salty foods and to avoid rehospitalization. Possible solution: Prescription for homemaker assistance. • Dr. M regularly engages patients with What Matters in an outpatient setting. New for inpatient rounds, but feasible to include. • Worthwhile if there is time for follow-up (not just one question and one answer in 30 seconds). • No patients 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 day of rounding feels better than asking on the first day. • Asking a What Matters question helped Dr. M bond with the patients. • 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 patient 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 cycle.
<p>Test again. Questions to explore through more testing include:</p> <ul style="list-style-type: none"> • Is it better to ask the What Matters question at the beginning or end of the encounter? • How can we get at What Matters for our patients with cognitive impairment? • Where is the best place to document the information from the What Matters engagement? <ul style="list-style-type: none"> ○ Whiteboard: “Anyone” can use the whiteboard. Can this be done effectively? ○ Epic documentation agreement (meetings underway with Epic team to discuss options). • Are the daily multidisciplinary rounds/huddles the best place to discuss what’s learned from What Matters engagements? <ul style="list-style-type: none"> ○ 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 physicians to reference in a consult visit or rounding?

Example: Testing a 4Ms Screening for Older Adults in Primary Care

<h3 style="margin: 0;">Plan-Do-Study-Act Record</h3>	<p>NAME OF HEALTH SYSTEM: Name</p> <p>NAME OF PERSON COMPLETING FORM: Name</p> <p>DATE: Date</p>		
	<p>Change Idea to ___ develop or <input checked="" type="checkbox"/> test or ___ implement</p>		
	<p>Description:</p> <p>Cycle 1: Test a 4Ms “screening set” with one older adult patient in your care.</p> <ul style="list-style-type: none"> • What Matters: <ul style="list-style-type: none"> ○ Ask, “What makes life worth living?”; “What would make tomorrow a really great day for you?”; “What concerns you most when you think about your health and health care in the future?” ○ Confirm the presence of a health care proxy (proxy’s name, contact information) • Medication: <ul style="list-style-type: none"> ○ Identify use of high-risk medications • Mentation: <ul style="list-style-type: none"> ○ Administer the Mini-Cog ○ Administer the PHQ-2 • Mobility: <ul style="list-style-type: none"> ○ Conduct the TUG Test 		
PLAN:			
Questions: What do we want to know? [Add or edit questions below, as needed.]			
<ol style="list-style-type: none"> 1. Can we conduct all 4Ms items (above) on intake for one older adult patient? 2. How long does it take? 3. How does it feel for the staff conducting the assessment? (e.g., What went well? What could be improved?) 4. How does it feel for the patient/family receiving the assessment? (e.g., What went well? What could be improved?) 5. What are we learning from conducting this 4Ms screening set? Did we learn anything about this patient that will improve our care, service, and/or processes? 			
Predictions: What do we think will happen? [Edit draft answers below, as needed.]			
<ol style="list-style-type: none"> 1. Yes 2. 10 minutes 3. Staff will give at least two ideas/identify two issues with the 4Ms screening set 4. Patient/family will give at least one idea/issue with the screening set use 5. Staff will get at least one insight/“a-ha” regarding care for the patient from the screening set 			
Plan for the change or test: Who, What, When, Where. What are we going to do to make our test happen? [Edit the draft tasks below, as needed.]			
List the tasks necessary to complete this test (what)	Person responsible	When	Where
<ol style="list-style-type: none"> 1. Select an older adult patient with whom we are likely to be able to conduct this test in the next 3 days. Identify a patient who we might “easily” engage on all items of the 4Ms screening set. 			

2. Select a staff person who will conduct the test and brief her/him.			
3. Decide on what you will say to invite the patient/family to participate in testing the 4Ms screening set. For example, “We are testing ways to know our patients better to develop the right care plan. Would you be willing to test a set of questions today and give your opinion about this experience?”			

Plan for data collection: Who, What, When, Where. How will we compare predictions to actual? [Adapt or edit the sample data collection form below, as needed.]

- Fill in data collection plan (Who, What, When, Where) [example below]:

4Ms Screening Set Test: NAME OF HEALTH SYSTEM		Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6
4Ms Screening Set Test: NAME OF CONTACT PERSON							
Date							
What Matters	Asked: What makes life worth living? (yes/no)	Y N	Y N	Y N	Y N	Y N	Y N
	Asked: What would make tomorrow a really great day for you? (yes/no)	Y N	Y N	Y N	Y N	Y N	Y N
	Asked: What concerns you most when you think about your health and health care in the future? (yes/no)	Y N	Y N	Y N	Y N	Y N	Y N
	Has health care agent? (yes/no/didn't review)	Y N DR					
Medication	Identified use of high-risk medication (yes/no/didn't review)	Y N DR					
Mentation	Administered the Mini-Cog (yes/no)	Y N	Y N	Y N	Y N	Y N	Y N
	Administered the PHQ-2 (yes/no)	Y N	Y N	Y N	Y N	Y N	Y N
Mobility	Conducted TUG Test (yes/no)	Y N	Y N	Y N	Y N	Y N	Y N
Amount of time to complete							
Staff feedback							
Patient/family feedback							
Other notes and/or questions that came up from this test							

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

- Fill in during or after conducting the test

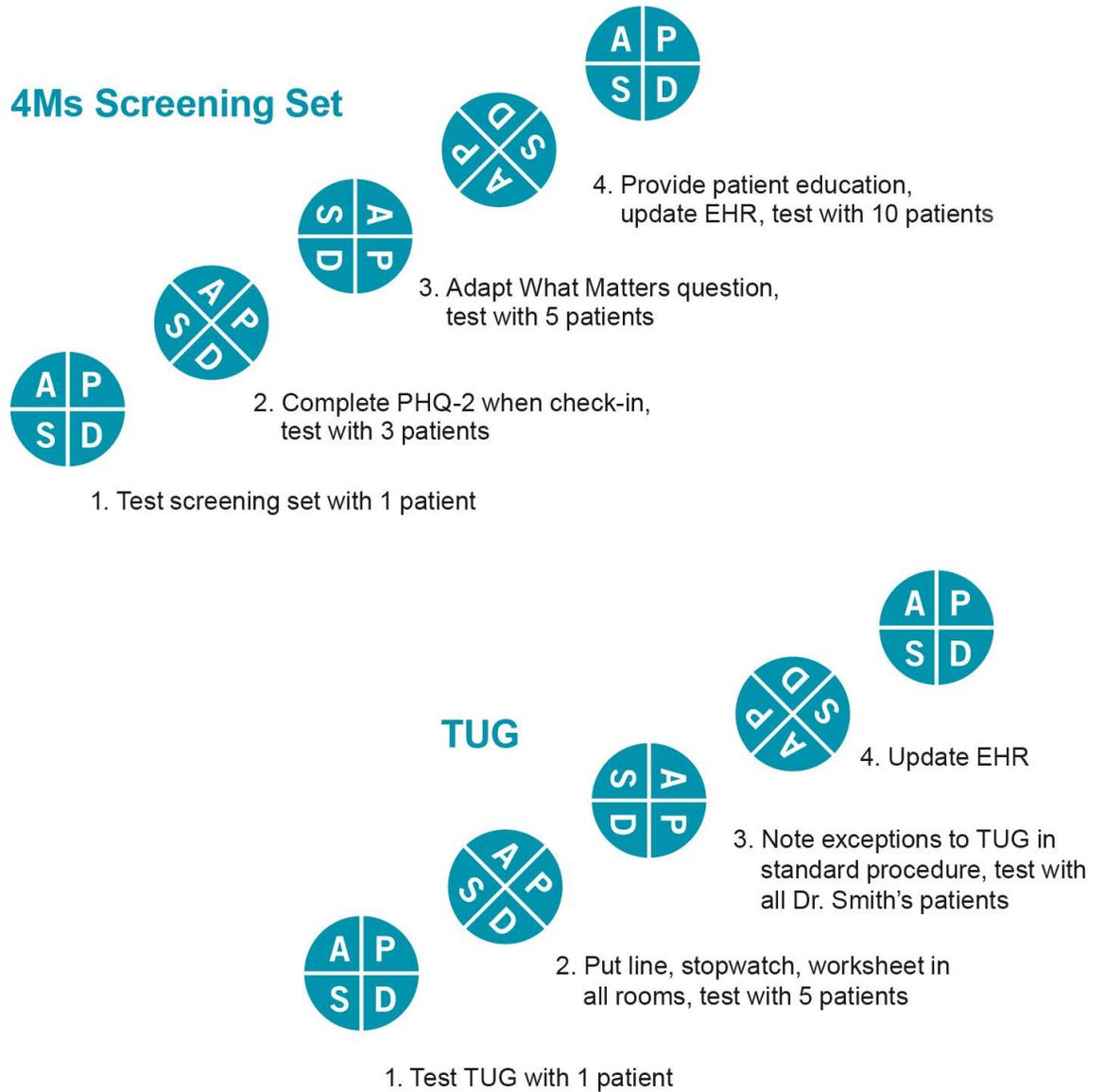
STUDY: Complete analysis of data; summarize what was learned; compare what happened to predictions above.

- Fill in after conducting the test

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

- Fill in after conducting the study. Will you adopt, adapt, abandon, or run the test again? For example, PDSA cycle 2: Conduct test again with 5 patients making the following adjustments...

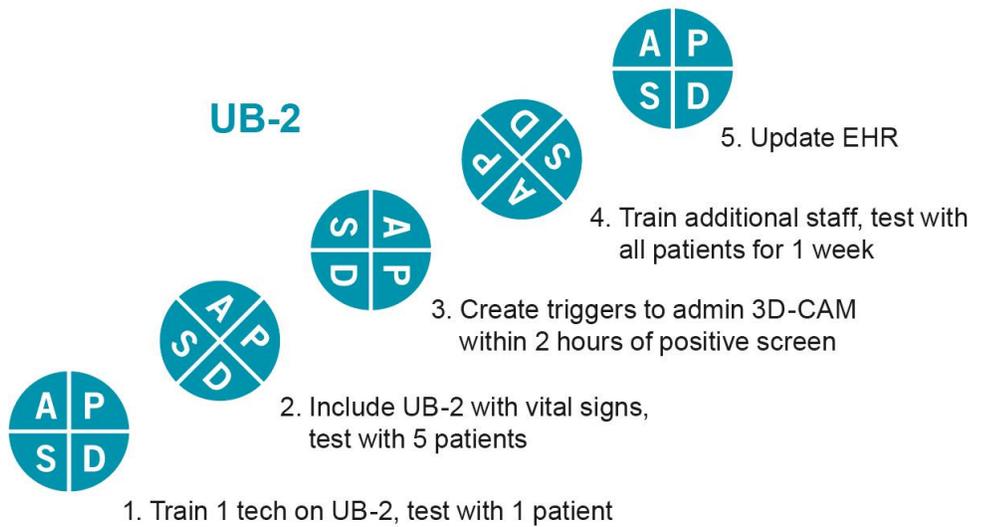
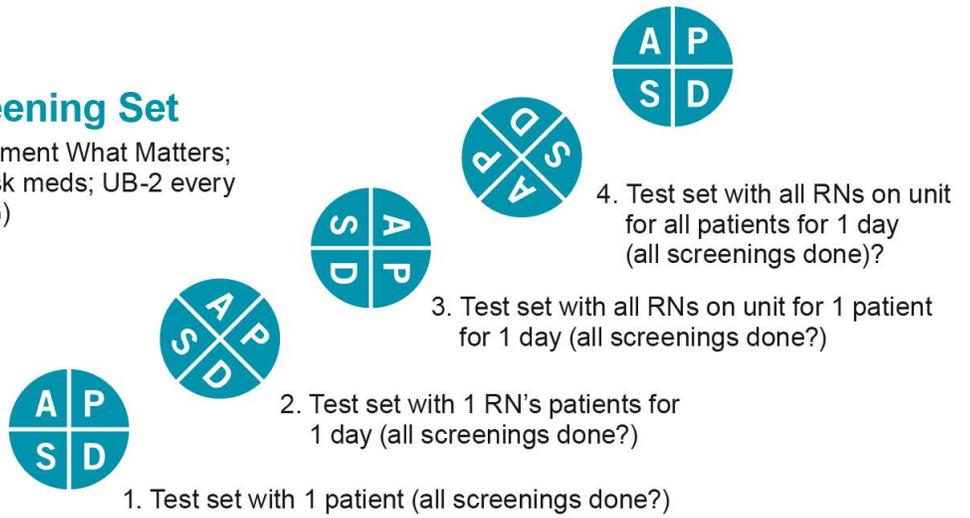
Example: Ambulatory/Primary Care Multiple PDSA Cycles



Example: Hospital-Based Care Multiple PDSA Cycles

4Ms Screening Set

(Ask and document What Matters; review high-risk meds; UB-2 every 12 hours; TUG)



Appendix G: Implementing Reliable 4Ms Age-Friendly Care

The 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 as an observation guide. Another way is to review patient records to confirm completeness of 4Ms documentation and alignment of care team actions with information obtained in assessment. Note that you only need to a handful of patient records to tell you that your 4Ms performance is not at a high level (say, 95 percent or higher).⁶⁰ For example, if you see three instances of incomplete 4Ms care in a random sample of 10 records, you have strong evidence that your system is not performing in a way that 95 percent or more of your patients are experiencing 4Ms care.

If IHI visited your care setting, we also would look for several kinds of evidence that your site has the foundation for reliable 4Ms care, including:

- If we asked five staff members, they would use the same explanation for WHY your site does the 4Ms work.
- If we asked five staff members, they would use the same explanation for HOW your site does the 4Ms work.
- Staff at your site will have documentation for the 4Ms work; they can access your 4Ms 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.
- Performance evaluation refers to the 4Ms work.

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

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

We highly recommend you create and monitor an age-friendly measurement dashboard to understand the impact of your efforts. This can be accomplished in two ways:

1. Segment an existing dashboard by age and monitor performance for older adults (ages 65 years and older); 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 health systems understand the impact of 4Ms age-friendly care. These measures are not designed to compare or rank health systems 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 health systems with a range of skills and capacity in measurement.

Basic Outcome Measures	Hospital Setting	Ambulatory/Primary Care Setting
30-day readmissions	X	
Emergency department utilization		X
Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey questions	HCAHPS	CGCAHPS
Length of stay	X	

Advanced Outcome Measures	Hospital Setting	Ambulatory/Primary Care Setting
Delirium	X	N/A
collaboRATE (or similar tool adopted by your site to measure goal concordant care)	X	X

Additional 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 health systems stratify key performance measures by these factors to reveal disparities and provoke action to eliminate them. For Age-Friendly Health Systems, we encourage stratifying outcome measures for older adults using the [Office of Management and Budget core race and ethnicity factors](#) to identify disparities in patient care and experience.

References

- ¹ Adapted from: Tinetti M. “How Focusing on What Matters Simplifies Complex Care for Older Adults.” Institute for Healthcare Improvement Blog, January 23, 2019. <http://www.ihl.org/communities/blogs/how-focusing-on-what-matters-simplifies-complex-care-for-older-adult>
- ² Naik AD, Dindo L, Van Liew J, et al. Development of a clinically-feasible process for identifying patient health priorities. *J Am Geriatr Soc* (in press).
- ³ Tinetti ME, Esterson J, Ferris R, Posner P, Blaum CS. Patient priority-directed decision making and care for older adults with multiple chronic conditions. *Clin Geriatr Med*. 2016;32:261-275.
- ⁴ *Condensed Conversation Guide for Identifying Patient Priorities (Specific Ask)*. Patient Priorities Care. <https://patientprioritiescare.org/resources/clinicians-and-health-systems/>
- ⁵ *Serious Illness Conversation Guide*. Ariadne Labs. <https://www.ariadnelabs.org/areas-of-work/serious-illness-care/resources/#Downloads&%20Tools>
- ⁶ McCutcheon Adams K, Kabcenell A, Little K, Sokol-Hessner L. “Conversation Ready”: A Framework for Improving End-of-Life Care. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2015. (Available at ihl.org.) See: *Steward Principle*
- ⁷ AGS 2019 Beers Criteria Pocketcard. American Geriatrics Society; 2019. <https://geriatricscareonline.org/ProductAbstract/2019-ags-beers-criteria-pocketcard/PC007>
- ⁸ Hill-Taylor B, Sketris I, Hayden J, Byrne S, O’Sullivan D, Christie R. Application of the STOPP/START criteria: A systematic review of the prevalence of potentially inappropriate prescribing in older adults, and evidence of clinical, humanistic and economic impact. *J Clin Pharm Ther*. 2013;38(5): 360-372.
- ⁹ Maher RL, Hanlon JT, Hajjar ER. Clinical consequences of polypharmacy in elderly. *Expert Opin Drug Saf*. 2014;13(1).
- ¹⁰ Fick DM, Inouye SK, Guess J, Ngo LH, Jones RN, Saczynski JS, Marcantonio ER. Preliminary development of an ultrabrief two-item bedside test for delirium. *J Hosp Med*. 2015;10(10):645-650.
- ¹¹ Fick DM, Inouye SK, McDermott C, et al. Pilot study of a two-step delirium detection protocol administered by certified nursing assistants, physicians and Registered Nurses. *J Gerontol Nurs*. 2018;44(5):18-24.
- ¹² Stopping Elderly Accidents, Deaths & Injuries. *Assessment: Timed Up & Go (TUG)*. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2017. https://www.cdc.gov/steady/pdf/TUG_Test-print.pdf
- ¹³ Shah N. The case against hospital beds. *Politico*. November 8, 2017. <https://www.politico.com/agenda/story/2017/11/08/the-case-against-hospital-beds-000575>
- ¹⁴ Mathias S, Nayak US, Isaacs B. Balance in elderly patients: The “Get-Up and Go” test. *Arch Phys Med Rehabil*. 1986;67(6):387-389.

- ¹⁵ Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. *J Am Geriatr Soc.* 1986;34(2):119-126.
- ¹⁶ Blaum C, Rosen J, Naik AD, et al. Initial implementation of patient priorities-aligned care for patients with multiple chronic conditions. *J Am Geriatr Soc.* [in press]
- ¹⁷ Tinetti M. Strategies for aligning decision-making with the health priorities of older adults with multiple chronic conditions. [under review]
- ¹⁸ *Condensed Conversation Guide for Identifying Patient Priorities (Specific Ask)*. Patient Priorities Care. <https://patientprioritiescare.org/resources/clinicians-and-health-systems/>
- ¹⁹ AGS 2015 Beers Criteria. American Geriatrics Society; 2015. <https://geriatricsonline.org/toc/american-geriatrics-society-updated-beers-criteria/CL001>
- ²⁰ Lumish R, Goga JK, Brandt NJ. Optimizing pain management through opioid deprescribing. *J Gerontol Nurs.* 2018;44(1):9-14.
- ²¹ Mattison ML, Afonso KA, Ngo LH, Mukamal KJ. Preventing potentially inappropriate medication use in hospitalized older patients with a computerized provider order entry warning system. *Arch Intern Med.* 2010;170(15):1331-1336.
- ²² Reuben DB, Gazarian P, Alexander N. The Strategies to Reduce Injuries and Develop Confidence in Elders Intervention: Falls risk factor assessment and management, patient engagement, and nurse co-management. *J Am Geriatr Soc.* 2017;65(12):2733-2739.
- ²³ Deprescribing Guidelines and Algorithms. Deprescribing.org. <https://deprescribing.org/resources/deprescribing-guidelines-algorithms/>
- ²⁴ O'Mahony D, O'Sullivan D, Byrne S, O'Connor MN, Ryan C, Gallagher P. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. *Age Aging.* 2015;44(2):213-218.
- ²⁵ Marcantonio ER. Delirium in hospitalized older adults. *N Engl J Med.* 2017;377:1456-1466.
- ²⁶ McDowell JA, Mion LC, Lydon TJ, Inouye SK. A nonpharmacologic sleep protocol for hospitalized older patients. *J Am Geriatr Soc.* 1998;46:700-705.
- ²⁷ Hsieh TT, Yue J, Oh E, Puelle M, Dowal S, Trivison T, Inouye SK. Effectiveness of multi-component non-pharmacologic delirium interventions: A meta-analysis. *JAMA Intern Med.* 2015;175(4):512-520.
- ²⁸ Larson EB. Evidence supports action to prevent injurious falls in older adults. *JAMA.* 2017;318(17):1659-1660.
- ²⁹ Wong CA, Jones ML, Waterman BM, Bollini ML, Dunagan WC. The cost of serious fall-related injuries at three Midwestern hospitals. *Jt Comm J Qual Patient Saf.* 2011;37(2):81-87.
- ³⁰ Klein K, Mulkey M, Bena JF, Albert NM. Clinical and psychological effects of early mobilization in patients treated in a neurologic ICU: A comparative study. *Crit Care Med.* 2015;43(4):865-873.

- ³¹ Hospital Elder Life Program (HELP) for Prevention of Delirium. <https://www.hospitalelderlifeprogram.org/>
- ³² Naik AD, Dindo L, Van Liew J, et al. Development of a clinically-feasible process for identifying patient health priorities. *J Am Geriatr Soc*. [in press]
- ³³ Tinetti ME, Esterson J, Ferris R, Posner P, Blaum CS. Patient priority-directed decision making and care for older adults with multiple chronic conditions. *Clin Geriatr Med*. 2016;32:261-275.
- ³⁴ *Condensed Conversation Guide for Identifying Patient Priorities (Specific Ask)*. Patient Priorities Care. <https://patientprioritiescare.org/resources/clinicians-and-health-systems/>
- ³⁵ *Serious Illness Conversation Guide*. Ariadne Labs. <https://www.ariadnelabs.org/areas-of-work/serious-illness-care/resources/#Downloads&%20Tools>
- ³⁶ McCutcheon Adams K, Kabcenell A, Little K, Sokol-Hessner L. “Conversation Ready”: A Framework for Improving End-of-Life Care (Second Edition). IHI White Paper. Boston: Institute for Healthcare Improvement; 2019. [See: Steward Principle.] <http://www.ihl.org/resources/Pages/IHIWhitePapers/ConversationReadyEndofLifeCare.aspx>
- ³⁷ AGS 2015 Beers Criteria. American Geriatrics Society; 2015. <https://geriatricscareonline.org/toc/american-geriatrics-society-updated-beers-criteria/CLO01>
- ³⁸ Hill-Taylor B, Sketris I, Hayden J, Byrne S, O’Sullivan D, Christie R. Application of the STOPP/START criteria: A systematic review of the prevalence of potentially inappropriate prescribing in older adults, and evidence of clinical, humanistic and economic impact. *J Clin Pharm Ther*. 2013;38(5):360-372.
- ³⁹ Maher RL, Hanlon JT, Hajjar ER. Clinical consequences of polypharmacy in elderly. *Expert Opin Drug Saf*. 2014;13(1).
- ⁴⁰ Borson S. Standardized Mini-Cog© Instrument. <https://mini-cog.com/mini-cog-instrument/standardized-mini-cog-instrument/>
- ⁴¹ Welcome to the Patient Health Questionnaire (PHQ) Screeners. Pfizer. <http://www.phqscreeners.com/>
- ⁴² Stopping Elderly Accidents, Deaths & Injuries. *Assessment: Timed Up & Go (TUG)*. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2017. https://www.cdc.gov/steady/pdf/TUG_Test-print.pdf
- ⁴³ Shah N. The case against hospital beds. *Politico*. November 8, 2017. <https://www.politico.com/agenda/story/2017/11/08/the-case-against-hospital-beds-000575>
- ⁴⁴ Mathias S, Nayak US, Isaacs B. Balance in elderly patients: The “Get-Up and Go” test. *Arch Phys Med Rehabil*. 1986;67(6):387-389.
- ⁴⁵ Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. *J Am Geriatr Soc*. 1986;34 (2):119-126.
- ⁴⁶ Blaum C, Rosen J, Naik AD, et al. Initial implementation of patient priorities-aligned care for patients with multiple chronic conditions. *J Am Geriatr Soc*. [in press]

- 47 Tinetti M. Strategies for aligning decision-making with the health priorities of older adults with multiple chronic conditions. [under review]
- 48 *Condensed Conversation Guide for Identifying Patient Priorities (Specific Ask)*. Patient Priorities Care. <https://patientprioritiescare.org/resources/clinicians-and-health-systems/>
- 49 AGS 2015 Beers Criteria. American Geriatrics Society; 2015. <https://geriatricsonline.org/toc/american-geriatrics-society-updated-beers-criteria/CLOO1>
- 50 Lumish R, Goga JK, Brandt NJ. Optimizing pain management through opioid deprescribing. *J Gerontol Nurs*. 2018;44(1):9-14.
- 51 Mattison ML, Afonso KA, Ngo LH, Mukamal KJ. Preventing potentially inappropriate medication use in hospitalized older patients with a computerized provider order entry warning system. *Arch Intern Med*. 2010;170(15):1331-1336.
- 52 Reuben DB, Gazarian P, Alexander N. The Strategies to Reduce Injuries and Develop Confidence in Elders Intervention: Falls risk factor assessment and management, patient engagement, and nurse co-management. *J Am Geriatr Soc*. 2017;65(12):2733-2739.
- 53 Deprescribing Guidelines and Algorithms. Deprescribing.org. <https://deprescribing.org/resources/deprescribing-guidelines-algorithms/>
- 54 O'Mahony D, O'Sullivan D, Byrne S, O'Connor MN, Ryan C, Gallagher P. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. *Age Aging*. 2015;44(2):213-218.
- 55 Alzheimer's Association. <https://alz.org/>
- 56 Larson EB. Evidence supports action to prevent injurious falls in older adults. *JAMA*. 2017;318(17):1659-1660.
- 57 Wong CA, Jones ML, Waterman BM, Bollini ML, Dunagan WC. The cost of serious fall-related injuries at three Midwestern hospitals. *Jt Comm J Qual Patient Saf*. 2011;37(2):81-87.
- 58 Klein K, Mulkey M, Bena JF, Albert NM. Clinical and psychological effects of early mobilization in patients treated in a neurologic ICU: A comparative study. *Crit Care Med*. 2015;43(4):865-873.
- 59 Stopping Elderly Accidents, Deaths & Injuries. *Check for Safety: A Home Fall Prevention Checklist for Older Adults*. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2017. <https://www.cdc.gov/steady/pdf/STEADI-Brochure-CheckForSafety-508.pdf>
- 60 See, for example: Etchells E, Woodcock T. Value of small sample sizes in rapid-cycle quality improvement projects 2: Assessing fidelity of implementation for improvement interventions. *BMJ Qual Saf*. 2018;27(1):61-65.