**Background:** The need for a health care workforce with expanded skills in the care of older adults is increasingly evident as the US population ages. The evidence-based Age-Friendly Health Systems (AFHS) framework establishes a structure to reliably assess and deliver effective care of older adults with multiple chronic conditions: what matters, medication, mentation, and mobility (4Ms). Half of veterans receiving Veterans Health Administration (VHA) care are aged ≥ 65 years, driving its transformation into the largest AFHS in the US. In this article, we offer lessons on the challenges to AFHS delivery and suggest opportunities to sustaining age-friendly care.

**Observations:** Within 3 months of implementation, 85% to 100% of patients received 4M care in all care settings at our VA facilities. Key lessons learned include the importance of identifying, preparing, and supporting a champion to lead this effort; garnering facility and system leadership support at the outset; and integration with the electronic health record (EHR) for reliable and efficient data capture, reporting, and feedback. Although the goal is to establish AFHS in all care settings, we believe that initially including a geriatrics-focused care setting helped early adoption of 4Ms care in the sites described here.

**Conclusions:** Early adopters at 2 VHA health care systems demonstrated successful AFHS implementation spanning different VHA facilities and care settings. Successful growth and sustainability may require leveraging the EHR to reduce documentation burden, increase standardization in care, and automate feedback, tracking, and reporting. A coordinated effort is underway to integrate AFHS into VHA documentation, performance evaluation, and metrics in both the legacy and new Cerner EHRs.
The main cultural shift of the AFHS movement is to focus on what matters to older adults by prioritizing each older adult's personal health goals and care preferences across all care settings.\textsuperscript{9,11} Medication addresses age-appropriate prescribing, making dose adjustments, if needed, and avoiding/deprescribing high-risk medications that may interfere with what matters, mentation, or mobility. The Beers Criteria for Potentially Inappropriate Medication Use in Older Adults is often used as a guide and includes lists of medications that are potentially harmful for older adults.\textsuperscript{11} Mentation focuses on preventing, identifying, treating, and managing dementia, depression, and delirium across care settings. Mobility includes assisting or encouraging older adults to move safely every day to maintain functional ability and do what matters.\textsuperscript{13,16} Each of the 4Ms has the potential to improve health outcomes for older adults, reduce waste from low-quality services, and increase the use of cost-effective services.\textsuperscript{11,17}

In March 2020, the VHA Office of Geriatrics and Extended Care (GEC) set the goal for the VHA to be recognized by the IHI as an AFHS.\textsuperscript{18,19} US Department of Veterans Affairs (VA) facilities that joined the AFHS movement in 2020 are considered early adopters. We describe early adopter AFHS implementation at Birmingham VA Health Care System (BVAHCS) hospital, geriatrics assessment clinic (GAC), and Home Based Primary Care (HBPC) and at the Atlanta VA Medical Center (AVAMC) HBPC.

**IMPLEMENTING 4MS CARE**

The IHI identifies 6 steps in the Plan-Do-Study-Act cycle to reliably practice the 4Ms. eAppendix 1 (available online at doi:10.12788/fp.0420) provides a side-by-side comparison of the steps over a 9-month timeline independently taken by BVAHCS and AVAMC to achieve both levels of AFHS recognition.

**Step 1: Understand the Current State**

In March 2020 the BVAHCS enrolled in the IHI Action Community. Three BVAHCS care settings were identified for the Action Community: the inpatient hospital, GAC (an outpatient clinic), and HBPC. The AVAMC HBPC enrolled in the IHI Action Community in March 2021.

Before joining the AFHS movement, the BVAHCS implemented a hospital-wide delirium standard operating procedure (SOP) whereby every veteran admitted to the 313-bed hospital is screened for delirium risk, with positive screens linked to nursing-led interventions. Nursing leadership supported AFHS due to its recognized value and an exemplary process in place to assess mentation/delirium and background understanding for screening and acting on medication, mobility, and what matters most to the veteran. The BVAHCS GAC, which was led by a single geriatrician, integrated the 4Ms into all geriatrics assessment appointments.

For the BVAHCS HBPC, the 4Ms supported key performance measures, such as fall prevention, patient satisfaction, decreasing medication errors, and identification of cognition and mood disorders. For the AVAMC HBPC, joining the AFHS movement represented an opportunity to improve performance measures, interdisciplinary teamwork, and care coordination for patients. For both HBPC sites, the shift to virtual meeting modalities due to the COVID-19 pandemic enabled HBPC team members to garner support for AFHS and collectively develop a 4Ms plan.

**Step 2: Describe 4Ms Care**

In March 2020 as guided by the Action Community, BVAHCS created a plan for

<table>
<thead>
<tr>
<th>4Ms</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What Matters</strong></td>
<td>Advance care planning Goal-concordant care</td>
</tr>
<tr>
<td><strong>Medication</strong></td>
<td>Underprescribing Deprescribing High-risk medications</td>
</tr>
<tr>
<td><strong>Mentation</strong></td>
<td>Dementia Depression Delirium Posttraumatic stress disorder Substance use</td>
</tr>
<tr>
<td><strong>Mobility</strong></td>
<td>Safe mobility Falls risk reduction Maximizing function</td>
</tr>
</tbody>
</table>

Abbreviation: 4Ms, what matters, medication, mentation, mobility.
TABLE 2 Integration of What Matters Into VA Care Settings

<table>
<thead>
<tr>
<th></th>
<th>Birmingham VA Health Care System</th>
<th>Atlanta VA Medical Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assess</strong></td>
<td>“Do you have any personal preferences that we need to be aware of concerning your health care needs?”</td>
<td>“What matters most to veteran is _____, with an established goal of _____.”</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>On admission, twice per day, during rounds, change in condition</td>
<td>New consultations, return visits</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td>Electronic health record</td>
<td>Electronic health record</td>
</tr>
<tr>
<td><strong>Primary responsibility</strong></td>
<td>RN</td>
<td>MD</td>
</tr>
<tr>
<td><strong>Act on</strong></td>
<td>Care plan aligned; nursing empowered to place consultations; 4Ms interventions prioritized</td>
<td>Care plan aligned; what matters prioritized for patients with multiple complex chronic conditions</td>
</tr>
</tbody>
</table>

Abbreviations: 4Ms, what matters, medication, mentation, mobility; GAC, geriatric assessment clinic; HBPC, Home Based Primary Care; NP, nurse practitioner; PT, physical therapist; RN, registered nurse; SW, social worker; VA, US Department of Veterans Affairs.

Each of its 3 care settings that described assessment tools, frequency, documentation, and responsible team members. All BVAHCS care settings achieved level 1 recognition in April 2020. Of the approximately 300 veterans served by the AVAMC HBPC, 83% are aged > 65 years. They achieved level 1 recognition in August 2021.

**Step 3: Design and Adapt Workflows**

From April to August 2020, BVAHCS implemented its 4Ms plans. In the hospital, a 4Ms overview was provided with education on the delirium SOP at nursing meetings. Updates were requested to the electronic health record (EHR) templates for the GAC to streamline documentation. For the BVAHCS HBPC, 4Ms assessments were added to the EHR quarterly care plan template, which was updated by all team members (Table 2).

From April through June 2021, the AVAMC HBPC formed teams led by 4Ms champions: what matters was led by a nurse care manager, medication by a nurse practitioner and pharmacist, mentation by a social worker, and mobility by a physical therapist. The champions initially focused on a plan for each M, incorporating all 4Ms as a set for optimal effectiveness into their quarterly care plan meeting using what matters to drive the entire care plan.

**Step 4: Provide Care**

Each of the 4Ms was to be assessed, documented, and acted on for each veteran within a short period, such as a hospitalization or 1 or 2 outpatient visits. BVAHCS implemented 4Ms care in each care setting from August to October 2020. The AVAMC HBPC implemented 4Ms from July to September 2021.

**Step 5: Study Performance**

The IHI identifies 3 methods for measuring older adults who receive 4Ms care: real-time observation, chart review, or EHR report. For chart review, the IHI recommends using a random sample to calculate the number of patients who received 4Ms in 1 month, which provides evidence of progress toward reliable practice.

Both facilities used chart review with random sampling. Each setting estimated the number of veterans receiving 4Ms care by multiplying the percentage of sampled charts with documented 4Ms care by unique patient encounters (eAppendix 2, available online at doi:10.12788/fp.0420).

From August through October 2020, BVAHCS sites reached an estimated 97% of older veterans with complete 4Ms care: hospital, 100%; GAC, 90%; and HBPC, 83%. AVAMC HBPC increased 4Ms care from 52% to 100% between July and September 2021. Both teams demonstrated the
feasibility of reliably providing 4Ms care to > 85% of older veterans in these care settings and earned level 2 recognition. Through satisfaction surveys and informal feedback, notable positive changes were evident to veterans, their families, and the VA staff providing 4Ms age-friendly care.

**Step 6: Improve and Sustain Care**

Each site acknowledged barriers and facilitators for adopting the 4Ms. The COVID-19 pandemic was an ongoing barrier for both sites, with teams transitioning to virtual modalities for telehealth visits and team meetings, and higher staff turnover. However, the greater use of technology facilitated 4Ms adoption by allowing physically distant team members to collaborate.

One of the largest barriers was the lack of 4Ms documentation in the EHR, which could not be implemented in the BVAHCS inpatient hospital due to existing standardized nursing templates. Both sites recognized that 4Ms documentation in the EHR for all care settings would facilitate achieving level 2 recognition and tracking and reporting 4Ms care in the future.

**DISCUSSION**

The AFHS 4Ms approach offers a method to impart geriatrics knowledge, skills, and practice throughout an entire health care system in a short time. The AFHS framework provides a structured pathway to the often daunting challenge of care for complex, multimorbid, and highly heterogeneous older adults. The 4Ms approach promotes the provision of evidence-based care that is reliable, efficient, patient centered, and avoids unwanted care: worthy goals not only for geriatrics but for all members of a high-reliability organization.

Through the implementation of the 4Ms framework, consistent use of AFHS practices, measurement, and feedback, the staff in each VA care setting reported here reached a level of reliability in which at least 85% of patients had all 4Ms addressed. Notably, adoption was strong and improvements in reliably addressing all 4Ms were observed in both geriatrics (HBPC and outpatient clinics) and nongeriatrics (inpatient medicine) settings. Although one might expect that high-functioning interdisciplinary teams in geriatrics-focused VA settings were routinely addressing all 4Ms for most of their patients, our experience was consistent with prior teams indicating that this is often not the case. Although many of these teams were addressing some of the 4Ms in their usual practice, the 4Ms framework facilitated addressing all 4Ms as a set with input from all team members. Most importantly, it fostered a culture of asking the older adult what matters most and documenting, sharing, and aligning this with the care plan. Within 6 months, all VA care settings achieved level 1 recognition, and within 9 months, all achieved level 2 recognition.

**Lessons Learned**

Key lessons learned include the importance of identifying, preparing, and supporting a champion to lead this effort; garnering facility and system leadership support at the outset; and integration with the EHR for reliable and efficient data capture, reporting, and feedback. Preparing and supporting champions was achieved through national and individual calls and peer support. Guidance was provided on garnering leadership support, including local needs assessment and data analysis, meeting with leadership to first understand their key challenges and priorities and provide information on the AFHS movement, requesting a follow-up meeting to discuss local needs and data, and exploring how an AFHS might help address one or more of their priorities.

In September 2022, an AFHS 4Ms note template was introduced into the EHR for all VA sites for data capture and reporting, to standardize and facilitate documentation across all age-friendly VA sites, and decrease the reporting burden for staff. This effort is critically important: The ability to document, track, and analyze 4Ms measures, provide feedback, and synergize efforts across systems is vital to design studies to determine whether the AFHS 4Ms approach to care achieves substantive improvements in patient care across settings.

**Limitations**

Limitations of this analysis include the small sample of care settings, which did not include a skilled nursing or long-term care facility, nor general primary care. Although the short timeframe assessed did not allow us to report on the anticipated clinical outcomes of...
4Ms care, it does set up a foundation for evaluation of the 4Ms and EHR integration and dashboard development.

CONCLUSIONS
The VHA provides a comprehensive spectrum of geriatrics services and innovative models of care that often serve as exemplars to other health care systems. Implementing the AFHS framework to assess and act on the 4Ms provides a structure for confronting the HCP shortage with geriatrics expertise by infusing geriatrics knowledge, skills, and practices throughout all care settings and disciplines. Enhancing patient-centered care to older veterans through AFHS implementation exemplifies the VHA as a learning health care system.

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Disclaimer
The opinions expressed herein are those of the authors and do not necessarily reflect those of Federal Practitioner, Frontline Medical Communications Inc., the U.S. Government, or any of its agencies.

Ethics and consent
This work was reviewed and deemed exempt from formal institutional review board approval as quality improvement by the US Department of Veterans Affairs departments/personnel: Program Office Lead for the Age-Friendly Health Systems, Geriatrics and Extended Care, and Patient Care Services.

References
eAPPENDIX 1 Plan-Do-Study-Act Framework and Timeline at 2 US Department of Veterans Affairs Facilities
### eAPPENDIX 2 Counts Submitted for IHI Level 2 AFHS Recognition

<table>
<thead>
<tr>
<th>Birmingham VA Health Care System, 2020&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Atlanta VA Medical Center HBPC, 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital</strong></td>
<td><strong>GAC</strong></td>
</tr>
<tr>
<td>Charts reviewed, No.</td>
<td>20</td>
</tr>
<tr>
<td>Patients with all 4Ms documented, No.</td>
<td>20</td>
</tr>
<tr>
<td>Encounters, No.&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1590</td>
</tr>
<tr>
<td>Estimated No. of patients receiving 4Ms care (%)</td>
<td>1590 (100)</td>
</tr>
</tbody>
</table>

Abbreviations: 4Ms, what matters, medication, mentation, mobility; AFHS, Age-Friendly Health System; GAC, geriatrics assessment clinic; HBPC, Home Based Primary Care; IHI, Institute for Healthcare Improvement; VA, US Department of Veterans Affairs.

<sup>a</sup>August 1, 2020, to October 31, 2020.

<sup>b</sup>Total unique patient encounters or average daily census in 1 month. Birmingham VA Health Care System encounters include: hospital, live discharge; GAC, 23 geriatric assessment consultations, 28 inpatient consultations, and 35 video and phone visits; HBPC, 236 registered nurse Quarterly Plan of Care and 130 physician face-to-face home and video; The Atlanta VA Medical Center HBPC used the average daily census (294) for its calculations.