2025 MMS Information Session: Advancing Age-Friendly Care: From the 4Ms Framework to the CMS Inpatient Quality Measure

[SLIDE 1]

GHUNNEY: Good afternoon, everyone. Welcome to today's Measures Management System (MMS) Information Session entitled "Advancing Age-Friendly Care From the 4Ms Framework to the CMS Inpatient Quality Measure."

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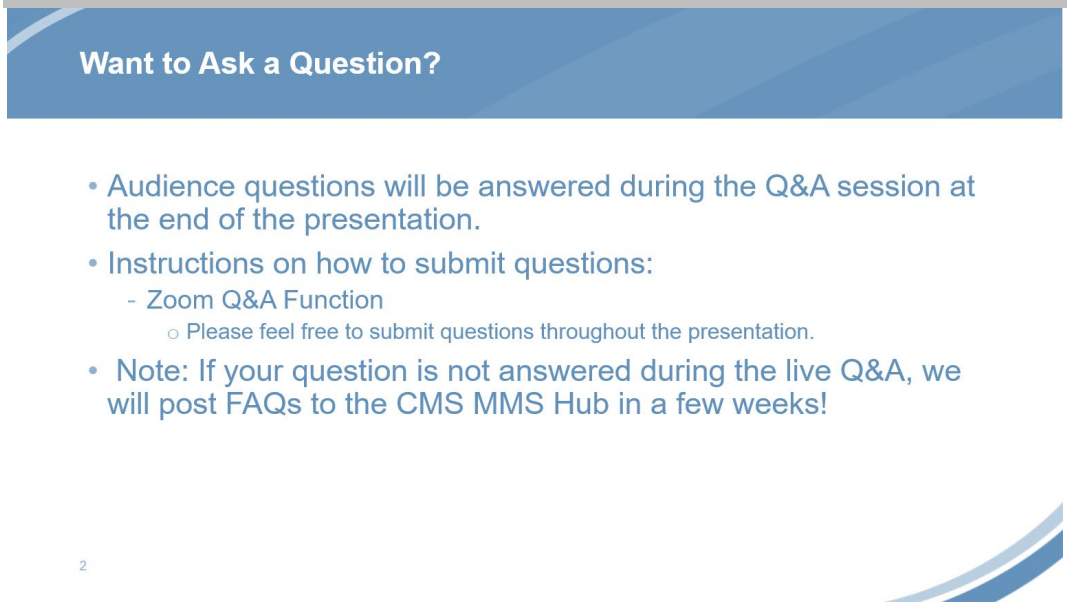
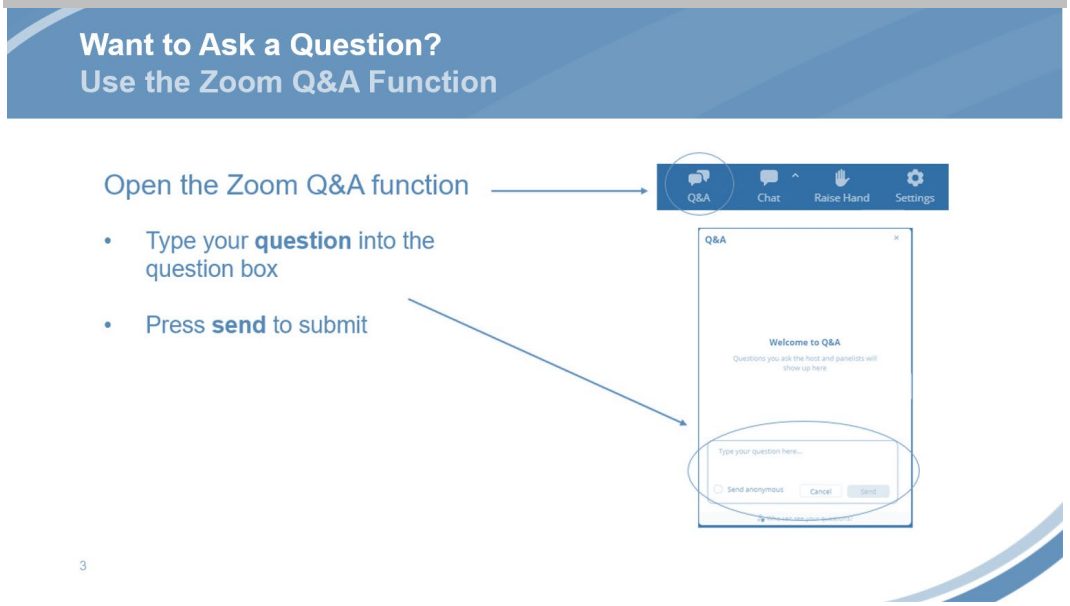


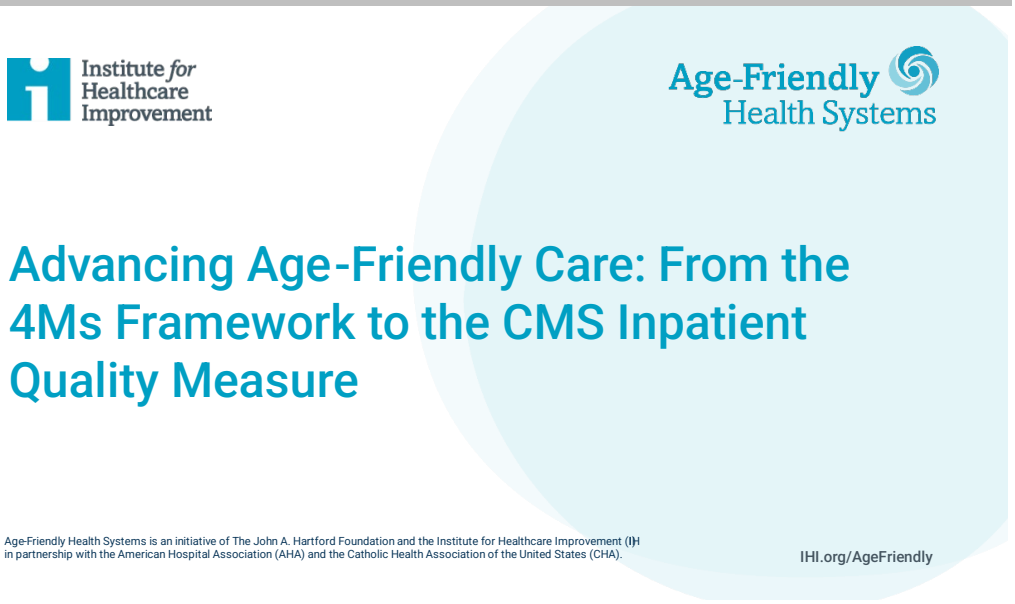
GHUNNEY: So there will be a Q&A session at the end of this presentation where we'll answer all audience questions. You're able to submit your questions using the Zoom Q&A function. So just feel free to submit questions throughout the presentation, and we will do our best to get to as many in-scope questions as we get at the end of the session. And if your question isn't answered during the Q&A, we'll be posting FAQs to the MMS Hub website in a few weeks.

[SLIDE 3]



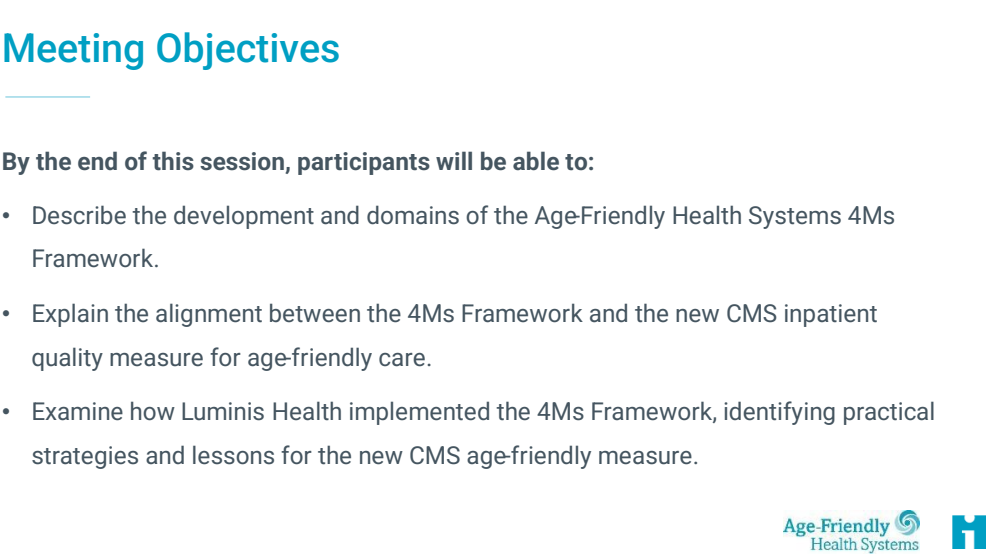
GHUNNEY: So this is just showing you where to access that Zoom Q&A function. So you'll see a little Q&A button at the bottom ribbon of the Zoom window. So when you open that up, you can type your question into the question box and hit "submit."

[SLIDE 4]



GHUNNEY: And the next one.

[SLIDE 5]



GHUNNEY: Okay, so we've got several objectives for today's webinar. By the end of this session, participants will be able to describe the development and domains of the Age-Friendly Health Systems 4Ms Framework, explain the alignment between the 4Ms Framework and the new CMS inpatient quality measure for age-friendly care, and examine how Luminis Health implemented the 4Ms Framework, identifying practical strategies and lessons for the new CMS age-friendly measure.

[SLIDE 6]

Meet the Panel

Facilitated by
KellyAnne Johnson, MPH
Senior Director
Institute for Healthcare Improvement

Rani Snyder, MPA
Acting President and Vice President, Program
The John A. Hartford Foundation

Katie Drago, MD, FACP
IHI Expert Faculty

Evelyn Ivy Wambui Mwangi,
MBChB, CMD, MPH, FACP
IHI Expert Faculty

Age-Friendly Health Systems

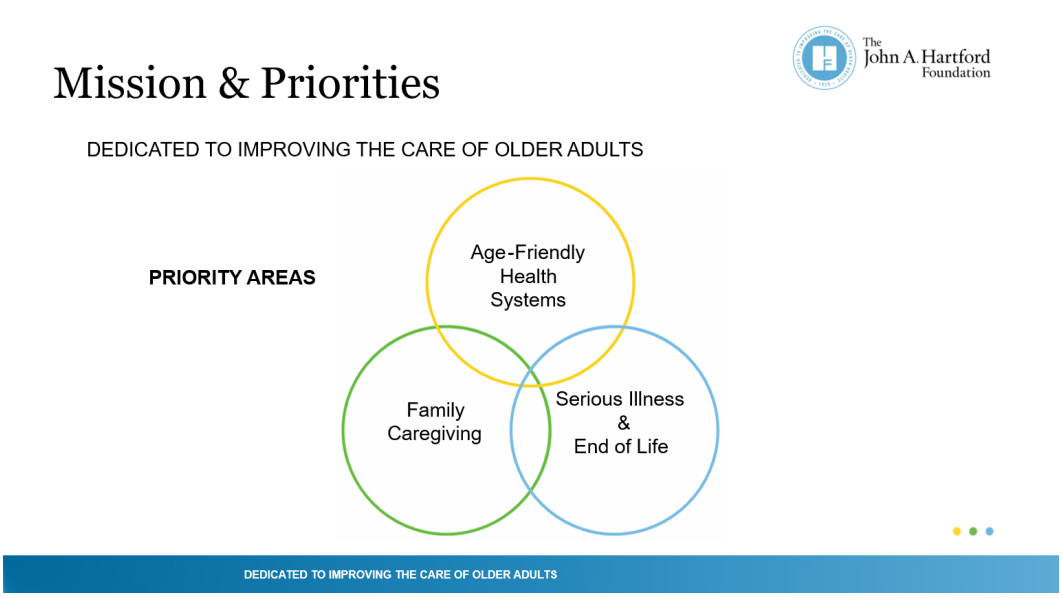
GHUNNEY: So we've got a wonderful panel of presenters today. So I'm going to kick it over to our first panelist, KellyAnne Johnson. KellyAnne, over to you.

JOHNSON: Thank you so much, and it is such a privilege to be with you all today. My name is KellyAnne Johnson. I'm a senior director for the

Age-Friendly Health Systems Movement at the Institute for Healthcare Improvement (IHI) which is a not-for-profit based here in the United States working all around the world on improving health and healthcare.

We have an incredible panel with us today that will help advance those objectives that we just heard, and we're really privileged to have with us to kick us off, Rani Snyder, who is acting president and vice president of programs at the John A. Hartford Foundation, which she'll share a little bit more about. It's a private philanthropy dedicated to improving the care of older adults. Rani has been an incredible strategic leader in setting the agenda for the Age-Friendly Health Systems Movement and getting us where we are today. Rani, to set the stage, can you walk us through the origins of the Age-Friendly Health Systems Movement and how it has evolved into the national and now policy-relevant effort that it is? Why is this a pivotable moment for age-friendly care in the United States?

[SLIDE 7]



SNYDER: Thanks, KellyAnne. I would love to do that. Thank you for asking. So I'm going to talk first just a little bit about the John A. Hartford Foundation. As KellyAnne mentioned, our mission is to improve the care of older adults. You can see that here, and we've been engaged in this work since 1982, is when we started our work in aging. Since that time all of our grants total about $737M. So I can't wait until we get to that $1B mark, but that speaks to the longevity, not only of aging and the people in our communities, but also of our work.

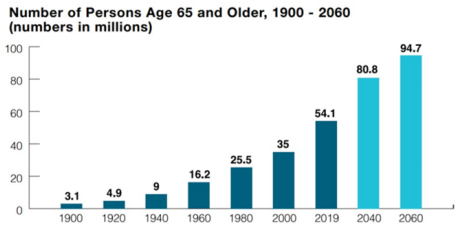
We work really hard to be a catalyst for change. We do that through collaboration. In this case today, with folks from the Institute for Healthcare Improvement (IHI), our grantees and partners, as well as others in the field — maybe that's Battelle, maybe that's CMS — in this case, we really work with all of the partners whom we can engage to work on improving care for older people, and that kind of collaboration is very much in our DNA. I will also add that all of the work that we do tries to have a lens towards removing disparities everywhere possible. So, as you can see in this diagram, we view our three programmatic areas as interconnected and overlapping.

[SLIDE 8]

Why Age-Friendly Health Care

The John A. Hartford Foundation

- **Demography** : # of older adults rapidly growing, more diverse
- **Complexity** : multiple chronic conditions, dementia, disability, isolation, social drivers of health
- **Disproportionate Harm** : higher rates of health care -related harm, discoordination, poor preparation for disasters

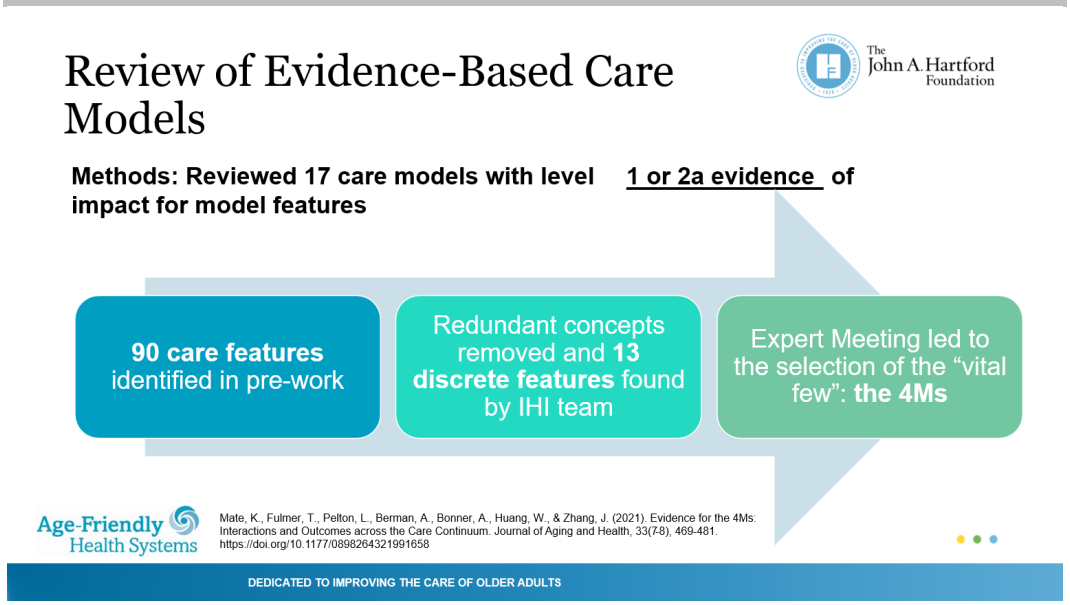


DEDICATED TO IMPROVING THE CARE OF OLDER ADULTS

SNYDER: So when we think about this, it's really why do we need age-friendly care? The most obvious answer that I think people come to first is the sheer demography of what's happening in our communities right now, and quite frankly, not just in our country but internationally. The increasing number of older people is rapidly growing, is increasingly diverse, and maybe less clear to some folks is the increasing complexity as well of the needs of older adults. So, as we age, we're more likely to have multiple chronic conditions. Things like dementia are conditions and diseases that come with age specifically and other forms of disability. Also, people are more likely to be isolated as they age, as are their caregivers sometimes, and there are a variety of social drivers of health that feed into any of those things.

And then, last but not least, the possibility for disproportionate harm that happens more for older adults than for other age populations. So higher rates of those healthcare-related harms, and the discoordination of care when there are multiple issues or multiple different conditions. And then, of course, in a public health sense, poorer preparation for disasters.

[SLIDE 9]



SNYDER: So we started this work in 2016 when our president, Terry Fulmer, came in. That's when we launched what we now call the "Age-Friendly Health Systems Movement." At that time there were multiple models of care — you can see 17 listed here — in a variety of different kinds of settings. Our foundation decided that those settings were too scattered and not uniform enough, as were those models. So we convened the Institute for Healthcare Improvement (IHI) as our partner, a whole set of experts in geriatrics, the model creators for example, health systems, and others like the American Hospital Association (AHA), to

identify the core elements that would be needed to improve health outcomes for older people. That is how we came to what we now call the "4Ms and the Age-Friendly Health Systems Movement" itself.

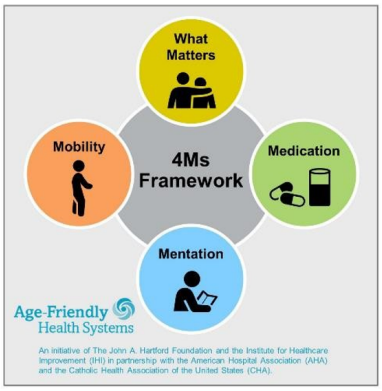
[SLIDE 10]

Age-Friendly Health Systems: Aim

The John A. Hartford Foundation

Build a movement so ***all care*** with older adults is **equitable** and **age-friendly**:

- Guided by an essential set of evidence-based practices (4Ms)
- Causes no harm
- Is consistent with *What Matters* to the older adult and their family

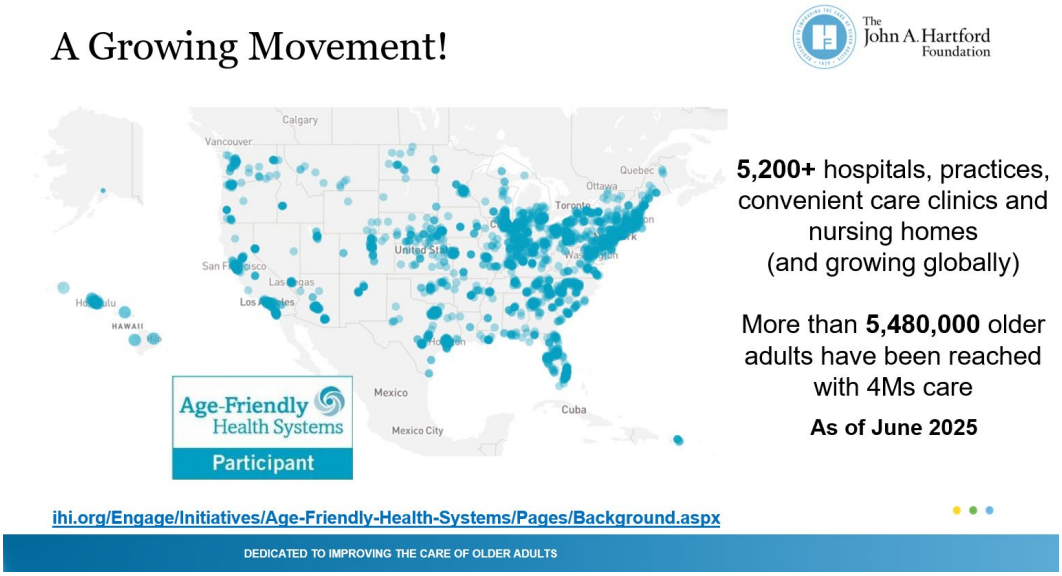


Fulmer, T., Mate, K. S., & Berman, A. (2018). The age-friendly health system imperative. *Journal of the American Geriatrics Society, 66*(1), 22-24.

DEDICATED TO IMPROVING THE CARE OF OLDER ADULTS

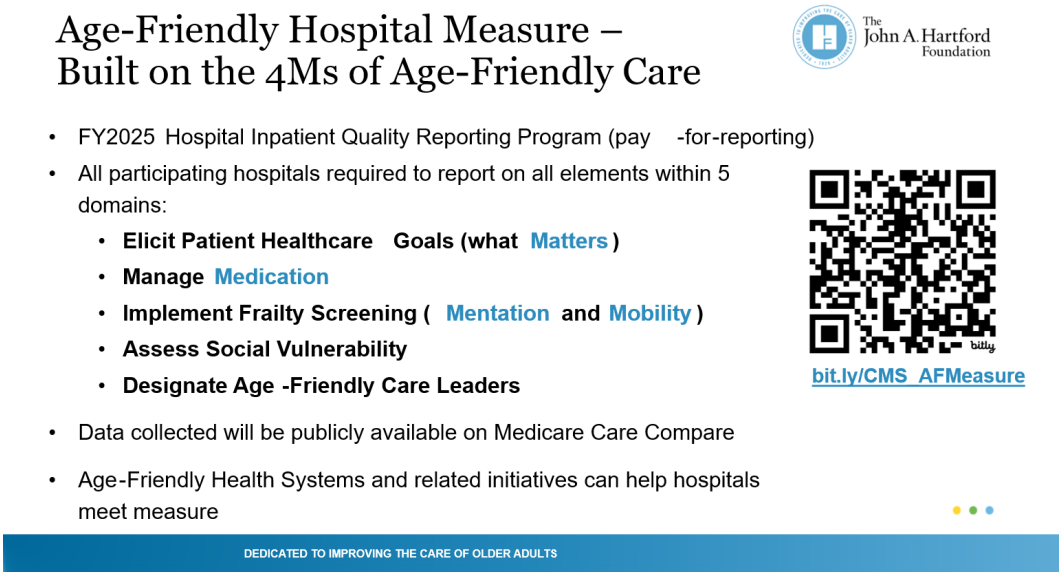
SNYDER: And here's the result. The result is Age-Friendly Health Systems (AFHS), and it is a framework really for care that is intended to build a movement so that all care for all adults anywhere that they receive care — we often say from the kitchen table out to any side of care and back home — is equitable and age-friendly. It is guided by an essential set of evidence-based practices. Those are the 4Ms that come from all of those models of care. It is designed to cause no harm, and it is consistent with ultimately what matters most to older people and their families and caregivers. You can see here just from this visual that what matters is at the top, and that all four of these M's are designed to come as a set. So medications, mentation which is anything cognitive, and mobility.

[SLIDE 11]



SNYDER: We're really excited and very proud of the rapid spread to hospitals, ambulatory practices, nursing homes, convenient care clinics, FQHCs — all over the place. Quite frankly, this number is already out of date. The most recent number I saw from the month of July is over 5,300. So it's constantly changing and growing, and you can see we've got a lot of work to do, but there are a lot of dots on this image.

[SLIDE 12]



SNYDER: The age-friendly hospital measure, which is really what we're here to talk about today, was built very much on those 4Ms and the concepts behind those 4Ms of age-friendly care. You're going to hear more about the domains later, but here I want to draw out the ways that the domains themselves within this age-friendly hospital measure match to the 4Ms. I'll just say on the top side that this measure is a clear signal to hospitals that CMS is serious about population-based care for older people and is committed to adding measurement to that. This is incredibly important.

The measure itself shows that hospital commitment to improving care for people who are 65 or older, who are receiving services in the hospital — whether that means the operating room, the emergency department (ED),

or elsewhere in the hospital — ultimately have to best-respond to older people.

I want to note here that I'm talking about 4Ms and the Age-Friendly Health Systems Movement, and there are two other programs that also help hospitals get to these 4Ms. They are the geriatric surgery verification through the American College of Surgeons (ACS) and the Geriatric Emergency Department Accreditation (GEDA) available through the American College of Emergency Physicians (ACEP).

So I'm not going to go through all of these 4Ms, because you're going to hear more about it, but I do want to note the ways that the different domains — these five domains of the measure — match with the 4Ms. You'll see them noted here in blue. You've got "what matters," and that's very much about goals of care. You've got "medications," and "mentation and mobility" both within the frailty screenings. I do want to also note that with that last bullet around "age-friendly care leaders," we have found in all of our work that you've got to have champions onboard who are doing this work, who are driving this work. So we're really grateful that that's a part of this measure as well.

Each domain is scored and the domain gets a point, only if all questions are attested positively. So the original measure developer, although this again is back to that collaboration and our DNA — we, IHI, ACEP has been a part of it — but I do want to give full credit to the American College of Surgeons (ACS) where this was initiated originally.

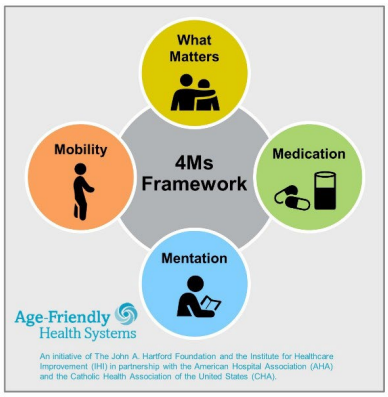
I also want to note that data collected will be publicly available on the Medicare Care Compare, which is really important because that's where hospitals show publicly what they're up to and what we should be looking at. So any of the three initiatives I just mentioned — the Age-Friendly Health Systems Movement, the "Geri-ED" work as we call it, and the geriatric surgery work, can help hospitals meet the measure.

So I just want to end on this slide by saying that there's a true opportunity here. There's an opportunity in and around hospitals that we're talking about today, and given the reception that this measure has received thus far, there's an opportunity for the field to go beyond what's already been done, to go beyond this current attestation measure and beyond hospitals to evolve and really make this measure reflect what's important and the moral imperative that it is to take care of older people in our society.

JOHNSON: Thank you, Rani, and thank you for setting incredible grounding and really calling us all to meet this moment to address this measure, but to go beyond really in the interest of supporting older adults who deserve this high quality care. It is my honor now to introduce Dr. Katie Drago.

[SLIDE 13]

The 4Ms of Age-Friendly Care



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.

Age-Friendly Health Systems

JOHNSON: If you go to the next slide, just to set us up, she is the medical director and director of quality with Marquis, a post-acute (PAC) and long-term care (LTC) group based in Portland, Oregon. She is also faculty at the Institute for Healthcare Improvement (IHI) working with Age-Friendly Health System (AFHS) efforts, both nationally and internationally. She is a seasoned interprofessional educator with the Oregon Geriatrics Workforce Enhancement Program (GWEP), and she previously ran the Inpatient Geriatrics Program at the Oregon Health and Science University (OHSU) Hospital, which some of that experience she'll call upon today.

I am really interested Katie, what makes the 4Ms Framework uniquely effective as an approach to age-friendly care, and to expand on what Rani was already sharing, how does the new CMS inpatient quality measure align with the 4Ms?

DRAGO: Well, thank you for having me, KellyAnne, and the staff of Battelle and CMS. It's always a delight when I get to go around and talk about a passion project of mine, which is Age-Friendly Health Systems (AFHS). Rani is also a very hard act to follow, so please judge accordingly.

The 4Ms, what really is magic about the 4Ms is that these areas, and you can see a bit more description and a bit more detail into the definition and really the core essence of each "M" here on this slide. All four of these areas are backed by decades of very well-established good science in the field of aging, care for older adults, and programmatic interventions — health system-based interventions — to support successful aging and healthy aging. So all of these concepts, all of these areas and 4Ms of care, are fringy by any stretch of the imagination. Those of you that have done clinical work, that still do clinical work, that care for older adults — I imagine every one of you is looking at this list and saying, "Yep, yep, yep." These areas really do make up a core set of pillars for healthy aging, getting through illness and injury with as few fireworks as possible and really success in the last chapters of life.

[SLIDE 14]

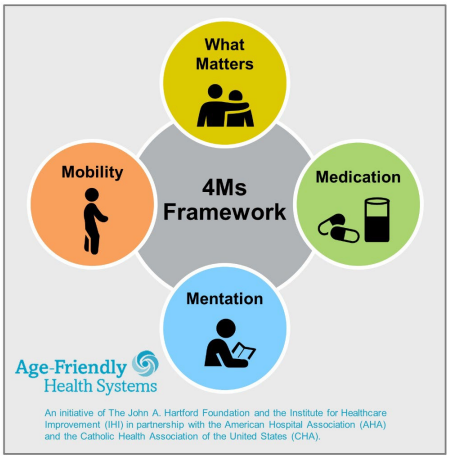
Why the 4Ms?

Represents core health issues for older adults

Builds on strong evidence base

Simplifies and reduces implementation and measurement burden on systems while increasing effect

Components are synergistic and reinforce one another



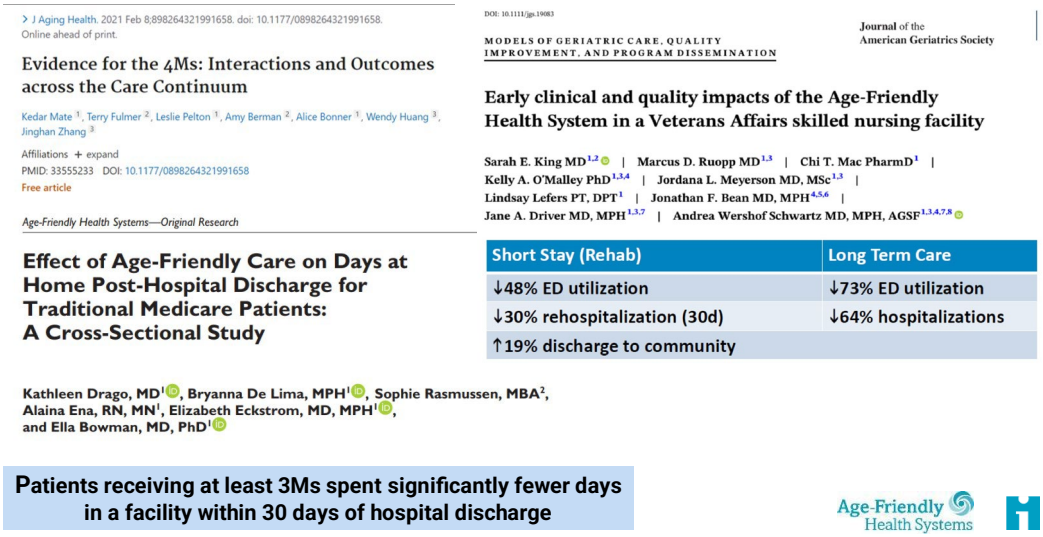
Age-Friendly Health Systems

DRAGO: So why the 4Ms? Because these make up the core of my profession as a geriatrician and all of us, regardless of our discipline when we care for older adults. So these ideas are built again on decades of really good science that has demonstrated that these areas — aligning care with what's important to the patient and their trusted circle, using medications that advance those goals without detracting or creating more complications, maintaining mobility, independence and function through all the stages of health in life, and then attending to depression, dementia and delirium across the spectrum and across the settings of care — are not just good practice on their own, but they are also heavily intertwined with each other.

What's also I think a little bit of magic about these 4Ms is that they are synergistic. You cannot disentangle one of the M's completely from the other three, or two from the other two. It is impossible, because medications are always going to have impacts on mobility, and vice versa. Think about your diabetic patient who has neuropathy in their fingers or becomes blind. So their function, managing their medication, becomes different and their care needs become different. You cannot disentangle mentation and things like depression from mobility and what matters. And then what matters, of course, drives all the other three and the way that we attend to those areas of health and life. So this, too, is really different.

I'm sure a lot of you have seen in your roles different initiatives and quality practices and regulatory measures and all sorts of things come and maybe go that evolve over time. This is different in my practice, different from much of what has come before, because it really does tap into that core essence of what it takes to successfully care for an older adult or someone aging and touches on the fact that everything is intertwined when dealing with older adults, their caregivers, and their environment.

[SLIDE 15]



> J Aging Health. 2021 Feb 8;898264321991658. doi: 10.1177/0898264321991658. Online ahead of print.

Evidence for the 4Ms: Interactions and Outcomes across the Care Continuum

Kedar Mate [1], Terry Fulmer [2], Leslie Pelton [1], Amy Berman [2], Alice Bonner [1], Wendy Huang [3], Jinghan Zhang [3]

Affiliations + expand

PMID: 33555233 DOI: 10.1177/0898264321991658

Free article

Age-Friendly Health Systems—Original Research

Effect of Age-Friendly Care on Days at Home Post-Hospital Discharge for Traditional Medicare Patients: A Cross-Sectional Study

Kathleen Drago, MD[1], Bryanna De Lima, MPH[1], Sophie Rasmussen, MBA[2], Alaina Ena, RN, MN[1], Elizabeth Eckstrom, MD, MPH[1], and Ella Bowman, MD, PhD[1]

DOI: 10.1111/jgs.19083

MODELS OF GERIATRIC CARE, QUALITY IMPROVEMENT, AND PROGRAM DISSEMINATION

Journal of the American Geriatrics Society

Early clinical and quality impacts of the Age-Friendly Health System in a Veterans Affairs skilled nursing facility

Sarah E. King MD[1,2] | Marcus D. Ruopp MD[1,3] | Chi T. Mac PharmD[1] | Kelly A. O'Malley PhD[1,3,4] | Jordana L. Meyerson MD, MSc[1,3] | Lindsay Lefers PT, DPT[1] | Jonathan F. Bean MD, MPH[4,5,6] | Jane A. Driver MD, MPH[1,3,7] | Andrea Wershof Schwartz MD, MPH, AGSF[1,3,4,7,8]

Short Stay (Rehab)	Long Term Care
↓48% ED utilization	↓73% ED utilization
↓30% rehospitalization (30d)	↓64% hospitalizations
↑19% discharge to community	

Patients receiving at least 3Ms spent significantly fewer days in a facility within 30 days of hospital discharge

Age-Friendly Health Systems

DRAGO: And what we're starting to see is this work put into practice and really starting to see the fruit of a model, an improvement model that really does attend to those core features of what it takes to care for older adults and the fact that they're all intertwined with each other.

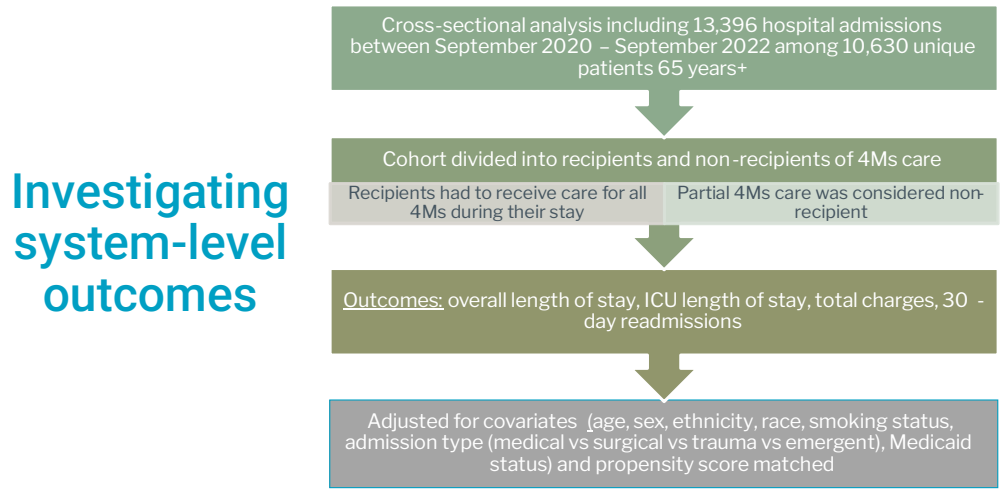
This is just a quick snapshot of a growing body of evidence that is out in the published literature looking at the impacts of health system adoption and reliable use of all 4Ms. You can see up here at the top right-hand side that this is a great study from I believe the VA in Boston looking at after they implemented and stood up their 4Ms and age-friendly program, what they saw in terms of utilization outcomes for their post-acute rehab and then long-term care (LTC) through the VA CLC.

These numbers are huge when you're talking about post-acute care (PAC) and long-term care (LTC) utilization. I know I work in post-acute and long-term care now, and when I see a 73% decrease in ED utilization amongst long-term care (LTC) residents, that will always get my attention.

And then on the bottom left there, this has actually worked for my former role at OHSU. We wanted to look at the impact of receiving 4Ms care during the admission and what impact, if any, it had on the days spent at home after in the 30 and 90 days after discharge, because we know what happens in the hospital does not stay in the hospital.

What we saw was a tipping point of three of 4Ms during the hospital stay, those patients that received three or 4Ms during their admission actually spent significantly fewer days in an emergency room, a hospital, or a post-acute care rehab within those first 30 days after hospital discharge. I don't know about you. After working in a hospital for ten years, I have never met a single patient regardless of age that would voluntarily choose to come back to a hospital when they had just been there. So this is an incredibly patient-centered outcome, and one that really proves what I think we have known all along, which is the 4Ms really do have a ripple effect. They have residents beyond just the day or the visit that they receive that kind of care.

[SLIDE 16]



DRAGO: This is work that we just found out yesterday is going to be published in "The Joint Commission Journal for Quality and Patient Safety." So it should be available in the next few months. This is also from my time at OHSU. We wanted to look at amongst our inpatients who were receiving, or exposed at least, to our 4Ms care during the admission, by September or by 2023 we looked back and realized we had a critical mass of about 13,000 and almost 400 (13,396) hospital admissions amongst patients over the age of 65 years of age. It was just under 11,000 unique patients.

Some poor folks had the misfortune of being admitted more than once, which is an opportunity — extra opportunity — for us to deliver 4Ms care. We took that cohort of admissions and split them up into two piles. One where the recipients got all 4Ms as we defined them during their stay, and

then everyone else that received zero, one, two or three during their stay. The reason for that again is that the 4Ms are synergistic. There is something magic that happens when attention is paid to all four, and we really wanted to pull that impact out of this work.

And then what we were most interested in looking at is the juicy matters that your bosses and my bosses care about, which is overall length of stay; time in an ICU which we had four at OHSU and so a lot of ICU beds; total charges, so what we charge payers like Medicare, Medicaid and other third parties for our care and not necessarily what we were reimbursed, and then 30-day readmissions, which we know is a huge issue across the country.

We adjusted for all the covariates of interest that can create some noise in this data. This is very complex, very juicy data. We also did some propensity risk score matching, which is just designed to further eliminate any noise by trying to compare apples to apples in terms of patient demographic and clinical characteristics as much as possible. And then we were able to stratify by case mix index (CMI), which is the measure of how complex the hospital stay was. So this includes both significant chronic conditions, as well as bigtime acute conditions like sepsis or respiratory failure and in a risk-adjusted number we were able to divide out those “sicker-sick” compared to those “less sick” during their stay. So let’s see what happened.

[SLIDE 17]

Outcome	Overall (% Change)	High CMI (% Change)	Low CMI (% Change)
Total Charges	- $18,697.29 (- 20%)	- $41,825.90 (- 27%)	- $8,965.31 (- 16%)
Length of Stay	- 0.31 days (- 6%)	- 1 day (- 15%)	+ 0.2 days (+ 4.4%)
ICU Length of Stay	- 0.3 days (- 12%)	- 0.6 days (- 19%)	- 0.31 days (- 15%)
30-day readmission	NS	- 14%	NS

Inpatient Utilization

Most of the benefit is experienced by the more seriously ill inpatients

- Severe, complex acute illness, moderate acute illness on top of stable chronic illness, mild acute illness on top of severe, end stage chronic illness

Work under review for publication

DRAGO: So here's what happened over those two years of almost 14,000 admissions. You'll see the outcomes of interest listed on the far left-hand side. The second column is just the apples-to-apples comparison with all the adjustments and propensity risk score matching, but I really want to call your attention to the third column which says "high CMI," and these are those sicker-sick inpatients. What we did is we took the top of the bell curve, so the cut point for high vs. low is a case mix index (CMI) of two. For context, the average at OHSU for all ICU patients is a case mix index (CMI) of four.

So a case mix index (CMI) of two is pretty much your standard in a tertiary care or academic medical center, your standard ward patient. So not truly that sick when we come to think about it. But it turns out if you have a case mix index (CMI) index higher than two, at OHSU you actually get

disproportionately more benefit in terms of utilization. These patients saw a greater decrease in total charges. They saw a one full day length of stay reduction, which is eye-popping and mind-boggling for those that work in hospital care. A two-thirds of a day's reduction in the ICU, which is a difference between being able to turn over that ICU bed at 4:00 in the afternoon, compared to 8:00 in the morning, which has huge impact for things like planned major surgeries, for patients that are expected to need a critical care bed afterwards. It was these patients that had the more complex, sort of the sicker-sick admission, that actually saw any benefit whatsoever in a reduction in 30-day readmissions.

Which was really surprising, right? One, it sort of stands to reason that these patients are going to be the most vulnerable to having more expensive care, spending longer in places and returning, you know, getting caught up in that revolving door back to the hospital, but it turns out the 4Ms is actually a very effective intervention to break that cycle for these patients, of which most of us working in acute care are seeing more and more of these sort of sicker-sick inpatients and more complex stays.

So there is juice in this lemon to be squeezed that the 4Ms as a model, as a conceptual model of care, and then all the way down to the actionable, granular activity it can make a huge difference for patients, but also for health systems, for payers, for staff, for all of us that interact in this very complex wheel.

[SLIDE 18]

CMS Measure Domain	Crosswalk to the 4Ms
Eliciting patient healthcare goals: This domain focuses on obtaining patients' health related goals and treatment preferences, which will inform shared decision-making and goal-concordant care.	What Matters
Responsible medication management: This domain aims to optimize medication management by monitoring the pharmacological record for drugs that may be considered inappropriate in older adults due to increased risk of harm.	Medication
Frailty screening and intervention: This domain aims to screen patients for geriatric issues related to frailty, including cognitive impairment/delirium, physical function/mobility, and malnutrition, for the purpose of early detection and intervention where appropriate.	Mentation, Mobility, and Medication
Social vulnerability: This domain seeks to ensure that hospitals recognize the importance of social vulnerability screening of older adults and have systems in place to ensure that social issues are identified and addressed as part of the care plan.	What Matters, Mentation Plus Burden Scale for Family Caregivers; Rush University Caring for Caregivers Program
Age-friendly care leadership: This domain seeks to ensure consistent quality of care for older adults through the identification of an agefriendly champion and/or interprofessional committee tasked with ensuring compliance with all components of this measure.	All 4Ms, including measuring the 4Ms and sustaining 4Ms care

Age-Friendly Health Systems

DRAGO: Here we're looking at the different domains. Not necessarily the statements there. Like for measure three, measure four and measure five there are multiple attestation statements underneath, but this is a high-level crosswalk to see that the CMS measure developers actually really took this 4Ms Framework and ran with it, because the 4Ms actually show up throughout all five domain measures.

The increasing importance nationwide starting back in the late teens and 2020 that all of us are now putting on social determinants of health (SDOH), social vulnerability, the intersection of things like food insecurity, transportation, insufficiency, other impacts that really impact the patient's ability maybe to benefit most from 4Ms care. It also shows up here, which is really forward-looking.

And then Rani mentioned the fact, too, that no institution or setting of care or unit or team that have been on an age-friendly journey have been able to achieve success without a leadership structure to help support and guide their efforts. They think this CMS measure not only includes the 4Ms content, but it also includes these two additional, incredibly important facets of the environment and the context in which we work that have been key to success. So for those who have not been on an age-friendly journey just yet, I welcome you to the family and know that all of us at IHI and John A. Hartford are here to support you as you go through aligning with the measure, but hopefully deciding to become age-friendly participants and really joining us on the journey. Thank you.

JOHNSON: Thank you, Dr. Drago. What an incredible overview of how the 4Ms have been impactful for you as a practitioner and how you've gone about your work and the impact they've had in your health system.

[SLIDE 19]

JOHNSON: It is my pleasure now to introduce another wonderful panelist, Dr. Ivy Mwangi, who is a geriatric hospitalist at the Anne Arundel Medical Center in Annapolis, Maryland. Her clinical focus is the care of hospitalized older adults with special interests in implementing age-friendly care, and she is also faculty with the Institute for Healthcare Improvement (IHI) supporting hospitals in their implementation journeys.

So, Dr. Mwangi, I want to point out that Luminis Health, and particularly the Anne Arundel Medical Center, have been real leaders in implementing the 4Ms of age-friendly care. They were pioneers in testing the 4Ms when we were doing some of the work that Rani described earlier. Could you share more about your hospital's journey? Fill us in on which practical strategies have been most effective in embedding the 4Ms into clinical workflows. As you can imagine, I'm especially curious about how those strategies will support hospitals in their readiness for attesting yes to the CMS measure.

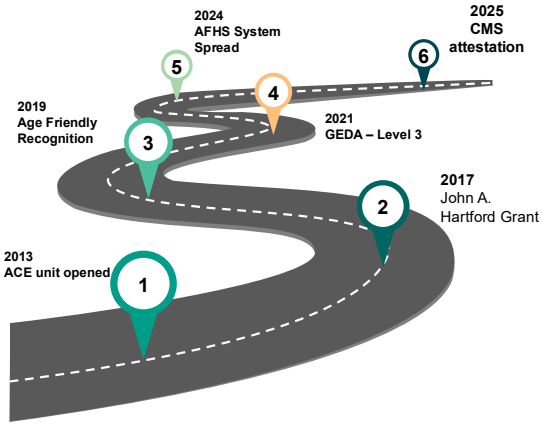
MWANGI: Thank you, Kelly for the introduction, and for the invitation to share at this forum. The Luminis Health experience in implementing the 4Ms Framework and now applying it to the CMS inpatient quality measure that was announced last fall. So by way of introduction, Luminis Health has two hospitals in the state of Maryland — Anne Arundel Medical Center, which is located in Anne Arundel County, and Doctors Community Hospital in Prince George's County.

Of interest, is that the Anne Arundel Medical Center emergency department (ED) is one of the busiest in the state of Maryland, with over

1.4 million ED visits. In the last one year, we have also seen over 30,000 older adults over the age of 65 present to our emergency department (ED), a large proportion of whom present from surrounding skilled nursing facilities (SNFs) and assisted living facilities, in addition to those coming from home. So the age-friendly care is very important and relevant to our day-to-day practice at the Anne Arundel Medical Center just given the population of adults over the age 65 that we are seeing.

[SLIDE 20]

Our Age Friendly Health System Journey



MWANGI: As you've heard, our Age-Friendly Health System (AFHS) journey started a few years ago now, over 10 years ago in 2013 when an acute care for elderly unit was opened in the acute care hospital at Anne Arundel supported by private donors at the time. We then were invited to join the first facilities that were awarded the John A. Hartford grant to work on becoming an Age-Friendly Health System (AFHS), and we got on level to recognition in 2019. Next, we had our geriatric ED accreditation Level

3, which is a bronze level, and we are continuing to work on achieving the Level 2 and subsequent Level 1 with our emergency department (ED), which as I have noted, is one of the busiest in the state and is serving several older adults every day.

We then joined the Age-Friendly Health Systems (AFHS) spread collaborative in 2024 with the aim of spreading age-friendly care to Doctors Community Hospital, which was now onboard with the same EHR as the Anne Arundel Medical Center, and we were also looking to involve more outpatient and ambulatory settings to become truly an Age-Friendly Health System (AFHS).

And so next, in the fall of 2024 the CMS measure was announced and found us in this journey where we were trying to become an Age-Friendly Health System (AFHS), and we're now working on the attestation measures as well.

[SLIDE 21]

Domains

Eliciting patient healthcare goals: This domain focuses on obtaining patients' health-related goals and treatment preferences, which will inform shared decision-making and goal-concordant care.

Responsible medication management: This domain aims to optimize medication management by monitoring the pharmacological record for medications that may be considered inappropriate in older adults due to increased risk of harm.

Frailty screening and intervention: This domain aims to screen patients for geriatric issues related to frailty, including cognitive impairment/delirium, physical function/mobility, and malnutrition, for the purpose of early detection and intervention where appropriate.

Social vulnerability: This domain seeks to ensure that hospitals recognize the importance of social vulnerability screening of older adults and have systems in place to ensure that social issues are identified and addressed as part of the care plan.

Age-friendly care leadership: This domain seeks to ensure consistent quality of care for older adults through the identification of an age-friendly champion and/or interprofessional committee tasked with ensuring compliance with all components of this measure.

Checklist

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MWANGI: The first thing that we did as a system was to look critically at all of the domains in the CMS measure. We almost immediately created a checklist, which was because we wanted to do three things. One, we wanted to understand all of the elements within the domains as outlined in the CMS measure. It was important that we review every attestation statement and gain a good understanding of what is expected from us as a health system in order to fully attest we were doing the work as required.

The next goal of the checklist was that we would have a gap or a SWOT analysis to make sure that we can identify our strengths where we were already doing well, since we had been on an age-friendly journey for a while, but we also wanted to note where we had opportunities for growth, for innovation, for improvement, and to work on areas of weakness so that

we could meet the attestation accordingly. Finally, we wanted this checklist to be a basis from where we could start to monitor our progress along the journey. So how will we know when we can actually attest to each measure, and especially looking at the elements within each domain?

[SLIDE 22]

4Ms	Setting	Assessment Tool	Staff	Frequency	Act On	Data
Mentation	Ambulatory	PHQ-2 PHQ-9	RN MD	Annual Wellness Visit	Treatment Non-pharmacological interventions	Healthy Aging Dashboard
	ED	bCAM	RN	Initial evaluation	De escalation protocol	
	In patient	bCAM	RN	Every shift	Delirium protocol	
	ICU	CAM-ICU	RN	Every shift	ABCDF bundle	

Multidisciplinary interfacility team

- Physicians
- Nursing
- PT/OT/SLP
- Informatics
- **Executive Leadership support**
- President
- Chief Medical Officer
- Chief Nursing Officer

Luminis Health

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MWANGI: At the top of this slide I show you a deeper dive into the elements of the checklist, and specifically under "mentation" I did leave the ambulatory section in there just because we are working on a health system spread. I want to draw your attention to the last three rows on that table at the top where you see the "emergency department inpatient and ICU." So this is a way of looking further into our checklist to ask ourselves that within each setting in the hospital, how are we assessing for delirium? Who is responsible for that assessment? How often do they do this assessment? And then, more importantly, what do we do with the

assessment? How are we acting on this assessment? Do we have protocols in place to respond to people with delirium?

And then, as we were doing the work, we have also started working on a Healthy Aging Dashboard where we can present our information in a linear manner in a way that we can start to stratify data and analyze exactly how we're performing as we move along the journey.

I also want to say that this work, as we all recognize, cannot be done by an individual. It really requires a multidisciplinary, interfacility team when you have a system implementing it like we do. We are very fortunate to have a multidisciplinary, interfacility team that was already onboard and working because we had already started working on the spread collaborative work earlier in 2024.

So in our interfacility team we have physicians, and this includes support from hospitals, medical directors at both hospitals, and executive leadership from both facilities, representation from the other disciplines that work with us, and also informatics and analytics without whom our Healthy Aging Dashboard would not be a reality. We have to underscore like the previous speakers have done, that without executive leadership support this work is not possible. So one of the things we have been fortunate to have throughout our age-friendly journey is that executive leadership support right from the top, and this lens of strength and resources to do the work as we go on our journey.

[SLIDE 23]

Comprehensive Geriatric Evaluation in the Emergency Department

Target population

- Community, Assisted Living or Skilled Nursing Facility resident
- Low Acuity, high complexity patient

Intervention

Fast track to comprehensive geriatric evaluation using 4Ms framework via telemedicine

Outcomes

- reduce length of stay in ED
- Facilitate early and safe discharge from the ED
- Support in the first 30 days post discharge
- If admitted – reduce length of stay
- Patient and family satisfaction

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MWANGI: So I wanted to start with this very exciting intervention in our emergency department (ED). As I have already said, we are a very busy emergency department in the state, and we see about 30,000 older adults every year. So it is important to start our interaction with the older adults coming into the hospital right at the beginning of their encounter with us, which is at the emergency department (ED). The indicators or the attestation statements required that fall under this are in domain three, where we should be seen to have measures to reduce delirium in the emergency department (ED) and reducing length of stay. So how does this work?

What we are targeting are older adults over the age of 65 who present to an emergency department (ED) and are potentially low acuity, even though they are high complexity just by virtue of their multiple chronic

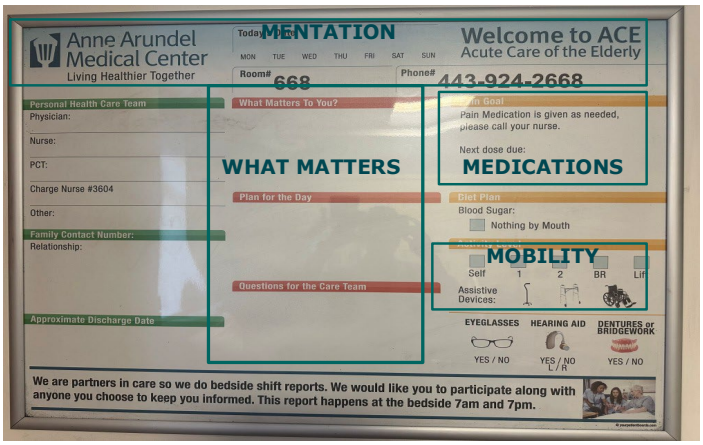
conditions. The goal is to triage them and fast track to a comprehensive geriatric evaluation using the 4Ms Framework via telemedicine. This will help us to start to attend to older adults within the first hour even of arrival in the emergency department (ED) and see whether we can manage to turn that patient around and safely discharge them back to the community.

So our goal is to reduce their length of stay in the ED, and to facilitate early and safe discharge. And then to support them in the community by following up within those first 30 days, and to see if we can reduce returns to the ED in the first seven or 30 days after discharge.

We also know that not all of these adults will be discharged. If they are admitted, we are going to be looking at the effect of that comprehensive geriatric evaluation on their length of stay in the hospital, and we're also going to be looking at the overall patient and family satisfaction. So with this one exciting intervention we are hoping to hit very many points on our CMS attestation, but also on longer-term outcomes that are of interest in the care of older adults.

[SLIDE 24]

The 4Ms at Luminis Health



Luminis Health 24

MWANGI: If a patient does get admitted in the hospital, how do the 4Ms work at Luminis Health? I thought that this whiteboard that is present in most of our patients' rooms is a great example of how we view the 4Ms practically on a day-to-day basis. So we have orientation and mentation right at the top, days of the week, the date, where you're located, and what unit in the hospital. What matters is central to the care we're providing to that older adult. And then we have a slot for medications and mobility, including mobility aids as well as things like eyeglasses, hearing aids and dentures, which we know are important in preventing delirium in older adults.

This whiteboard is a means of communication between patients and families and the interdisciplinary team, because everybody can see what is on that board and use the information to help provide better care.

[SLIDE 25]

What Matters – Patient Stories

MWANGI: What matters is really central to everything that we do in Anne Arundel, and also at Doctors Community Hospital, but also for this attestation. What matters is really the cornerstone. In the interest of time, I will only tell you the story of the lady. This is a representation. This is not really my patient. This was an online photo, but I wanted to bring that story up because I think the 4Ms really showed up in the care for the patient who I recently evaluated and was admitted for congestive heart failure (CHF), but what mattered most to this patient was that she was going to be a bridesmaid at her grandson's wedding. Her grandson's bride had graciously allowed her to walk down the aisle with her walker.

So we were very excited to employ all of the 4Ms in her care to make sure that we appropriately dosed medications for her to be low risk so that she wasn't short of breath, could walk down the aisle and could be able to

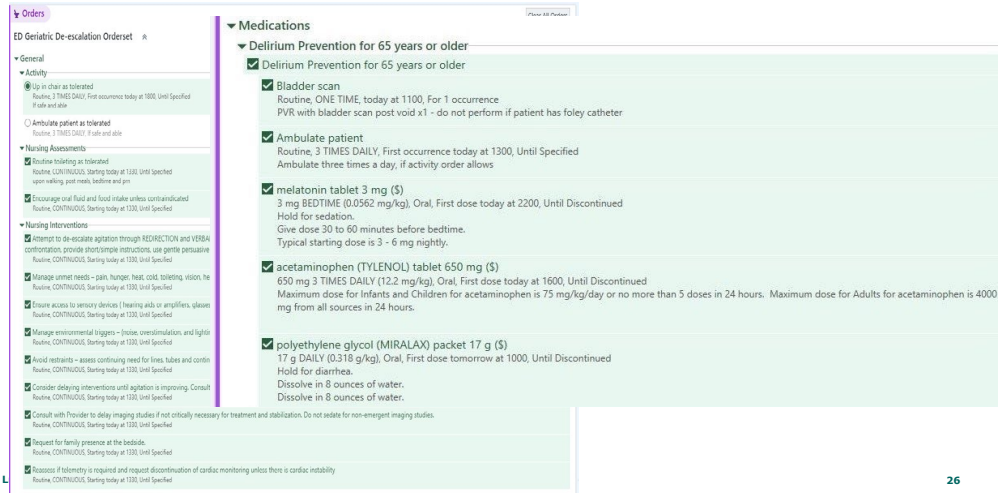
participate in her grandson's wedding. So I think this is why we do what we do, if we can align all of the healthcare for patients so that they can go back into the community and do what matters most to them.

In terms of documentation when a patient is admitted to the hospital on our HNP, which is the admission document that the physician will use, the code status and advanced directive are a hard stop. You have to indicate that you have reviewed the code status. You have reviewed the Maryland orders for life support, for life-sustaining treatment form. You have to indicate if you have also reviewed advanced directives, and you also have to answer the question of when these documents were completed and with whom you discussed those documents and issues.

So this is a hard stop and we begin to document what matters to patients in a very succinct and direct way as we provide care. Nurses will also document this in their intake and daily flowsheets.

[SLIDE 26]

Mentation: Delirium management in the hospital



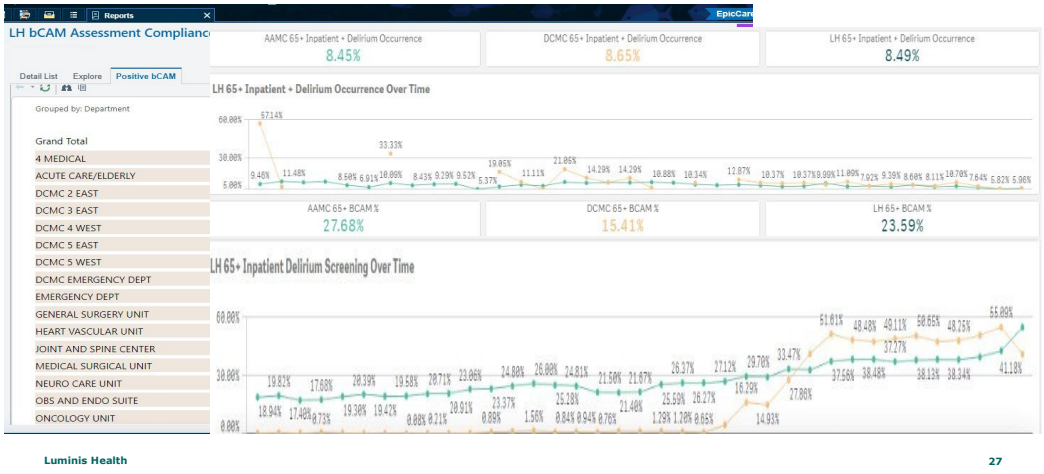
MWANGI: So here we are, our patient is now in the emergency department (ED). Like I said, it's where care in the hospital starts. We have a panel that we call the "de-escalation order set." This is designed with mostly non-pharmacological interventions (NPIs) to help prevent delirium in the emergency department (ED). Next, when the patient gets admitted to the hospital, every patient admitted there is an inpatient order set which caters either for observation patients or inpatient. No matter which order set you use, the delirium prevention panel automatically populates if the patient is over the age of 65.

And with one click, the delirium prevention panel shows up in the patient order set, and again prioritizes non-pharmacological interventions (NPIs). So it's another way in which we are practically addressing questions in

domain three of preventing screening for delirium, preventing delirium, and documenting that appropriately.

[SLIDE 27]

Mentation: Measurement of Delirium screening in the hospital



MWANGI: On our Healthy Aging Dashboard—just go ahead and click so that the graphs can show, please. Thank you. So the first one is a bCAM assessment, so we use the Brief Confusion Assessment Method (bCAM) to assess for delirium. Here I just wanted to show you that we can show data on a daily basis of how many patients over the age of 65 are in the hospital. How many of them, which is that number in the middle column where you see 272, how many of them received a bCAM assessment. Those two columns should have the same number, and so already we can see that here about 88% of screening was done. So we can then start to work with our units on the different floors to see what their barriers are to completing assessment.

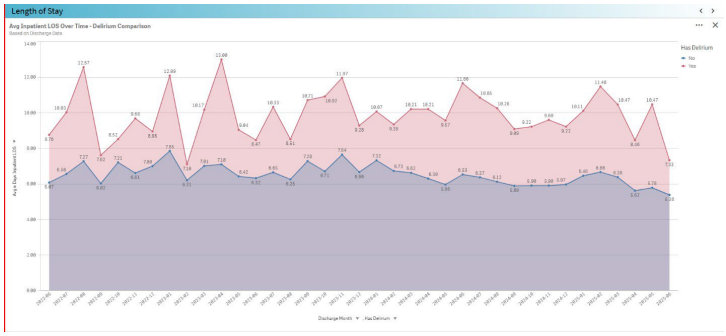
And then we also have in the column on the far left where you can see the total count of bCAM, which tells you how many patients are delirious. So this is just to show you that you can collect data on a daily basis to show how screening and assessment is ongoing in the facility.

And then in our Healthy Aging Dashboard we can see this on a month-to-month basis. As you can see, we can look at data from either Anne Arundel Medical Center or from Doctors Community Hospital, as well as the system as a whole. So again, building this dashboard to help us look at data in individual hospitals as well as across the system as a whole.

And then here you can see the screening of a time, and actually the most recent data shows that we are up to 75% screening in our hospitals which is really good.

[SLIDE 28]

Outcomes and Impact



LOS for patients with vs without delirium
Daily cost of inpatient stay x LOS for patients with vs without delirium
Discharge – new institutionalization vs community

Luminis Health 28

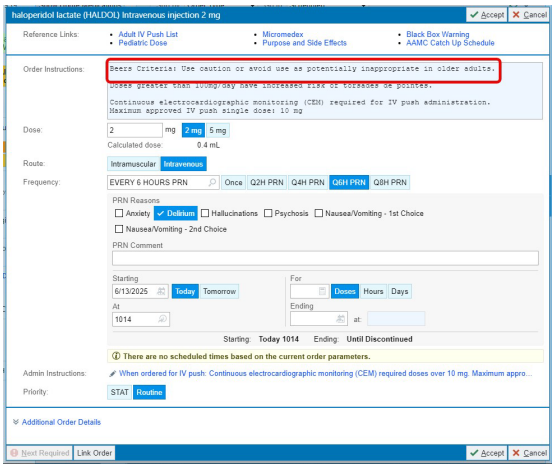
MWANGI: We're also interested in outcomes and impacts. So what is the length of stay for patients, for example, with delirium and without delirium? So without going into too much detail, the difference in patients who have delirium as you see in the lighter color compared to those without delirium in the darker color — the difference in the length of stay is about three days, and just the cost of the room for those three days, the difference is about $750,000 a year without counting all of the other medical care they'll be receiving. So we can immediately begin to see the impact of delirium and the necessity to have data that we can follow and that we can use to improve care and outcomes.

[SLIDE 29]

Medications

Medication reconciliation project is underway

BEERS Criteria

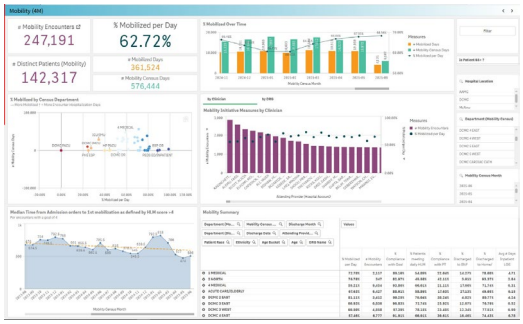


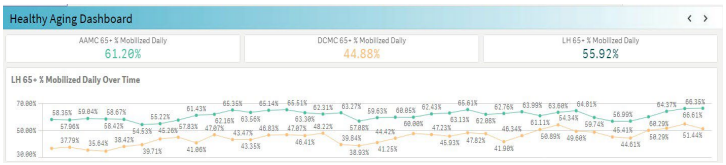
MWANGI: When it comes to medications we're using Epic as our EMR. So the Beers Criteria is embedded, and so that gives us nudges or practice advisories on potentially inappropriate medications. We have moved away from the use of best practice advisories, just because of the fatigue and not very good uptick from clinicians. So medications, we have that. We have a medication reconciliation project that is underway to help us evaluate medications when patients are admitted and to reconcile them in transitions of care within the hospital, and also at discharge.

[SLIDE 30]

Mobility-Hospital

Tool - JHLM
Metrics – feet to floor
Timing – from admission





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MWANGI: And then mobility is a very important thing. In the first quarter of this year we focused a lot on mobility. We made sure that our order sets are now pro-mobility instead of just fall prevention. Our goal is to now evaluate how well we are moving patients from the time of admission to the time of discharge. So if you can see in the upper right-hand corner, there is a graph with amber — with some orange and green bars — and those show you mobility of a patient comparing the days they were mobilized compared to their total stay in the hospital. Our goal is to make sure that we are mobilizing patients two to three times a day so that they can maintain their function.

[SLIDE 31]

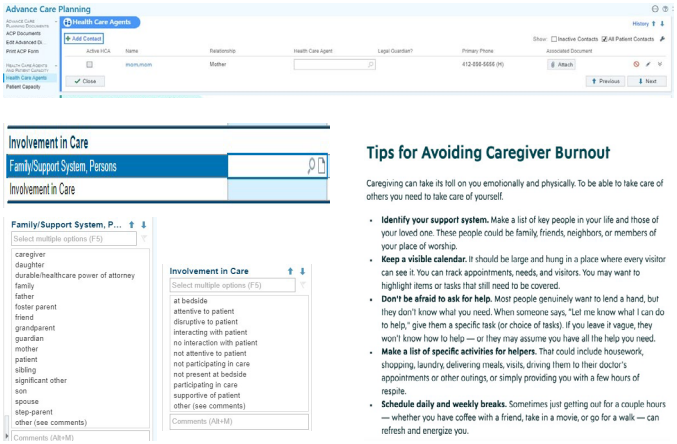
Screening for social isolation (loneliness)

Luminis Health 31

MWANGI: We're also screening for social isolation. This is a screenshot from Epic, but I do want to say that our case management and social workers do a comprehensive evaluation of patients on intake and make sure that we understand how their functional status was before they came in. All of their social factors such as transportation, insurance and so on, if they were on home health services, et cetera. What we are now trying to understand is how we're going to meet the requirement to do that screening, not just on admission, but also at discharge. I think that's a question outstanding for us to have a better understanding of how that works. We do a very good job on admission, but at discharge I think that is still a work in progress.

[SLIDE 32]

Caregiver Involvement



Luminis Health https://www.luminishealth.org/en/caring-for-caregivers 32

MWANGI: And then we want to make sure that we're taking care of our caregivers. So, as you can see at the top, we make sure that we note who the caregivers are, who's important to the patient from a healthcare standpoint. We also want to specifically note all of this in Epic. These are screenshots from our EHR. And then we have resources for our caregivers that we're distributing. They're present on our website, and this is our way of reaching out to caregivers without whom many of our patients continue to live and do what matters most to them in the community.

[SLIDE 33]

MWANGI: And then finally, so moving forward, we want to see how we can evaluate patients for frailty, outside of just the measures that we have given, but also the frailty score and because it's so relevant in geriatrics. So how are we doing? What are we doing with our data on nutrition, and how does that show up on our dashboard? That's an outstanding issue for us. Social determinants (SDOH), as I have said. We are looking at how to do a better discharge. And then overall we want to see how all of this work feeds into patient satisfaction and relevant outcomes such as readmissions, length of stay, patients being discharged to institutions instead of home, and then overall mobility and mortality. Thank you.

JOHNSON: Thank you so much, Dr. Mwangi, and to all the presenters for that incredible background. I will turn it over to our colleague at Battelle, Aya, to lead us through the Q&A.

[SLIDE 38]

Q: "What are the financial impacts of not responding to the age-friendly hospital measure?"

SNYDER: I'm going to frame this in a particular way as I dive into this question. First of all, we talk a lot about savings, you know, shorter length of stay. We talk about no readmissions, and really if you think about this measure complying with reporting on this particular measure is not about savings. It's actually on the other side. It's about *revenue*. It's about money coming in the door for your health system, and that is a very different way of thinking about it, and frankly a powerful way for hospital administrators.

Hospitals who are participating in the IQR program, which is basically all hospitals except for some critical access hospitals, have to report on the CMS age-friendly hospital measure in order to receive their full Medicare

payment updates. Hospitals will receive the full update, as long as they report on this measure and others in good faith. Hospitals that don't will face a penalty, and I'll be a little bit more specific. So the payments and reductions are set each year, and so I can't give you an absolute, but the "IQR measure updates," as they're called, are typically 2-3% of a hospital's Medicare spend. So we've gone to some of the estimates of the American College of Surgeons (ACS) to give you a sense of what that actually looks like, what that means.

They estimate that the penalty for not complying, so if you don't report, your hospital faces a reduction in your annual Medicare payment update which would be an increase in payment. Let's say you're an 800-bed hospital. That amount that you would lose if you don't comply could be up to $3M for a single year of not reporting on the measure, but an 800-bed hospital is a really big hospital. That is not your norm. If you're a 186-bed hospital, they estimate that it's about $200,000, and even that's a little bit larger than average. A smaller hospital, even a 25-bed critical access hospital (CAH), that would be about $20,000.

So hospitals are participating because they've got really thin margins already, and they do not want to leave any money on the table, and now they've got to report on age-friendly care as part of that process.

Q: "So can you clarify what population of patients is in the denominator for meeting the metrics of the CMS measures — age-friendly measures — as well as the IHI age-friendly standards?"

DRAGO: First of all, I want to touch on a question that's probably coming that remember this is an attestation measure, not a reporting measure. So we are not needing to submit actual performance data to CMS, and so there is no denominator for this measure. The reporting is simply "yes, we do this" or "yes, we have policies, procedures, processes to meet this statement within our best judgment and reason," or "no, we don't have that." This year there is no penalty for saying no. This is pay-for-reporting, okay? I feel like this question is coming, and so I'm just going to get out in front of it.

So for those who are interested in becoming sort of formal, you know, joining the age-friendly movement and becoming participants and then committed to care excellence, data is, of course, a very important part of that process. The denominator for tracking performance and what we use at OHSU and what I'm sure Dr. Mwangi uses at Luminis, the overall denominator is every inpatient — admitted patient — 65 years and older.

Remember the magic of the 4Ms is that they are relevant to every older adult, every health status and state of health, every phase of life, and every diagnosis. So we don't have to get much more complicated than that. This is a classic "what's good for the goose" situation. So when you're thinking about building your own dataflows, or thinking about just looking at current performance internally — remember, you don't have to report it to CMS just yet — we encourage you to take kind of a broad look and look across all inpatients that are 65 years and older.

Q: "How is CMS going to measure, if we actually meet the submain criteria for the five domains measure?"

DRAGO: Yes, I love being the deliverer of good news! Remember, this is a reporting measure. So in this current version it is pay-for-reporting. It is not pay for data performance. There is no mechanism right now, knock on wood, that requires hospitals to submit actual data for verification by CMS. It is you—all of us, excuse me, participating in the IQR reading each of those statements and then attesting either "yes, we have reasonable policies, practices, standard work, whatever to do this," or "no, we do not."

So then there is an element of the honor system to this. What in my simple brain, you know, we have seen CMS start with measures like this that are more attestation pay-for-reporting, and then over time to give us time to build up our systems and get things in place in a really meaningful and thoughtful way. It very well might turn into a reporting measure down the road. So I think that I can put this out there. I hope it does, but for right now there is no kind of backwards verification from CMS saying, "How exactly are you meeting this domain?" It's just pay-for-reporting, yes or no. Ivy, you have your hand up. Do you want to contribute. I probably missed something.

MWANGI: No, you did not, Katie. It was a very comprehensive answer. You literally took the words out of my mouth, but I did want to say that part of why we were showing our Healthy Aging Dashboard, and how we are drilling into each M is to figure out how exactly are we doing it. Who is doing it? What tools are we using? Where are we documenting this? How are we measuring it? In order to prepare ourselves in the event that somebody does come by and say, "So, you said you were doing this. Can you show us how?" We want to be able to meaningfully attest to the

measure. So while we might not be scrutinized now, this is the time to build up all of the systems and the SOPs and the policies that you need to be ready at the time when it will be time to show exactly how you are providing the 4Ms health system. So this is a good opportunity to build that up as we think about the measure going forward.

GHUNNEY: Thank you so much for this answer, and thank you so much, everyone, for all of these wonderful questions. We are at time. Again, the meeting materials will be posted on the MMS Hub website in the coming weeks.

[SLIDE 39]

GHUNNEY: As a reminder, just as always, visit the MMS Hub for all of the upcoming events and opportunities, or reach out to us at MMSsupport@battelle.org. Thank you again to our presenters, and thank you to this fantastic audience for attending today's session.

WEBINAR CONCLUDES