



# Age-friendly healthcare: integrating the 4Ms to enable age-friendly cancer care

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## Purpose of review

There is a growing movement towards person-centred, age-friendly healthcare in the care of older adults, including those with cancer. The Age-Friendly Health Systems (AFHS) initiative uses the 4Ms framework to enable this change. This review documents the utility and implications of 4Ms implementation across different settings, with a particular focus on cancer care.

## Recent findings

The AFHS initiative 4Ms framework uses a set of core, evidence-based guidelines (focussing on What Matters, Medication, Mentation and Mobility) to improve person-centred care. The successful implementation of the 4Ms has been documented in many different healthcare settings including orthopaedics primary care, and cancer care. Implementation of the 4Ms framework into existing workflows complements the use of geriatric assessment to improve care of older adults with cancer. Models for implementation of the 4Ms within a cancer centre are described. Active engagement and education of healthcare providers is integral to success. Solutions to implementing the What Matters component are addressed.

## Summary

Cancer centres can successfully implement the 4Ms framework into existing workflows through a complex change management process and development of infrastructure that engages healthcare providers, facilitating cultural change whilst employing quality improvement methodology to gradually adapt the status quo to age-friendly processes.

## Keywords

4Ms, age-friendly, cancer care, geriatric oncology

## INTRODUCTION

As the global population continues to age, the healthcare community faces the imperative task of adapting and innovating to provide effective and compassionate care for older adults, particularly those confronting the challenges of cancer. Ageing often brings a unique set of considerations, encompassing physical, psychological, and social aspects of care. Older adults are at disproportionate risk of harm in the hospital system and face increased rates of hospital associated disability [1,2]. Recognizing this, the concept of age-friendly healthcare has emerged as a pivotal framework for tailoring medical services to cater for the distinctive needs of older patients. In the context of cancer care, this article explores the application of the 4Ms framework – Medication, Mentation, Mobility, and What Matters Most – as a dynamic approach to enable age-friendly cancer care. By delving into each of these elements, we unveil a holistic strategy that not only addresses the complexities of cancer diagnosis and treatment in older adults but also fosters

a healthcare environment that respects their individuality and empowers them to navigate their cancer journey with dignity and resilience.

## PERSON-CENTRED, AGE-FRIENDLY HEALTHCARE: WHAT ARE THE 4Ms?

There is currently a shift occurring in healthcare from a traditional medical model that focuses on patients' presenting medical issues to one that is

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**KEY POINTS**

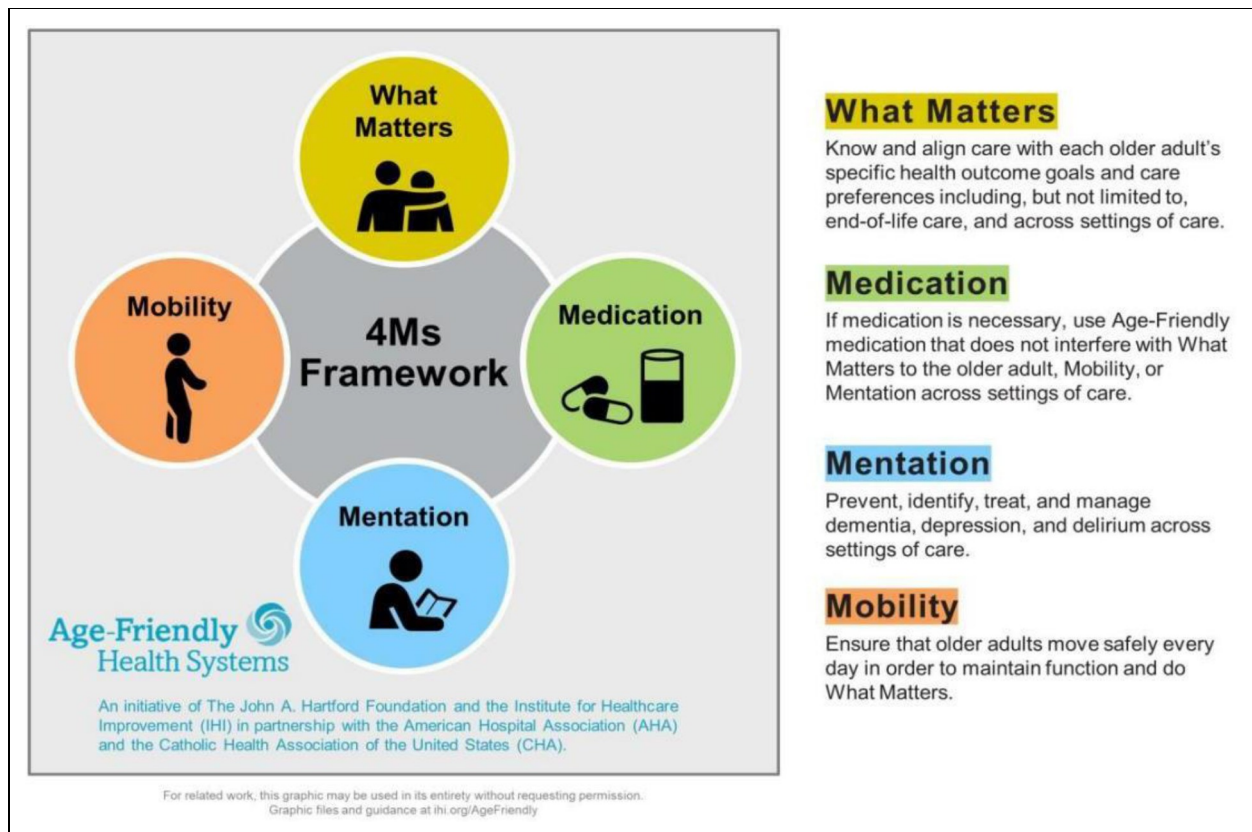
- Age-friendly healthcare has emerged as a pivotal framework for tailoring medical services to cater for the distinctive needs of older patients and enabling person-centred care.
- The Age-Friendly Health Systems Initiative is built on the 4Ms – What Matters, Medication, Mentation, and Mobility – of older adults.
- Implementation of the 4Ms framework in cancer care has the potential to improve care delivery for the increasing number of older adults diagnosed with the disease.

more person-centred [3,4]. The Institute of Medicine defines ‘patient-centred care’ as ‘providing care that is respectful of and responsive to individual preferences, needs, and values, and ensuring that patient values guide clinical decisions’ [5]. It is generally accepted that ‘person-centred care’ (PCC) can be used interchangeably with ‘patient-centred’ and broadens the applicability of this concept. Person-centred care is key to providing high quality care [5] and has proven to enhance health outcomes, satisfaction, and self-care in patients with chronic

diseases [6,7]. Person-centred care decreases hospital readmissions [8] and reduces medication errors [9].

An emerging component of PCC is the question ‘What Matters to You?’ (WMTY), aimed at involving the individual in their own care [10]. This approach supports the shift from asking the traditional question – ‘What is the matter with you?’ to ‘What matters to you?’ [11]. The answer to the WMTY question should guide the subsequent care plan [11]. Many models of geriatric care contain PCC principles at their core [12].

As the person-centred care concept evolved, in 2017 the John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI) collaborated with the American Hospital Association and the Catholic Health Association of the United States to design an initiative known as Age-Friendly Health Systems (AFHS). The AFHS initiative provides a framework for implementation of age-friendly care, called the 4Ms framework (Fig. 1). This framework comprises a set of core evidence-based guidelines to be embedded in various healthcare settings and aligns with the older adult’s care preferences [13,14]. The framework does not intend to replace usual care, but ensures the essential principles of age-friendly care are consistently incorporated into delivery across care settings [15]. The



**FIGURE 1.** The 4Ms framework [13].

4Ms are the essential elements of high-quality care for older adults and, when implemented together, indicate a broad shift by health systems to focus on the needs of older adults [13].

## IMPLEMENTATION OF THE AGE-FRIENDLY HEALTH SYSTEMS INITIATIVE

Rather than focusing on an individual's age to guide treatment decisions, age-friendly care treats patients holistically, with treatment decisions being guided by the patient's own goals and preferences [16]. This aligns well with cancer care because it creates an environment that is inclusive to people across all age groups, especially the most vulnerable and frail [17,18]. Age-Friendly Health Systems aim to enhance quality of life for all, by maintaining the optimal health of older adults, addressing potential health needs promptly, preventing avoidable harms, and maximizing the care of people who are seriously ill or are at the end of life [15].

Initial testing of the 4Ms framework began in 2017, through the collaboration of IHI with five health services in the United States [15]. In the implementation phase, the AFHS 4Ms framework was expanded across the United States. As of July 2023, there were over 3000 organizations recognized by the IHI as AFHS participants [19]. Evidence has demonstrated that the 4Ms framework improves both physical and psychosocial health outcomes for older adults while minimizing avoidable harms and healthcare costs [14,20].

### 'WHAT MATTERS'

In Age-Friendly Health Systems, 'What Matters' to the older adult is the guiding principle for the relationship with the care team and the basis of the care that is provided. Awareness of 'What Matters' for each individual patient should align care with specific outcome goals and preferences throughout the care journey [13]. The process of asking 'What Matters' involves understanding the older adult's life context and priorities. These broad conversations explore what is important to older adults in their lives outside of their health (e.g. children, family, pets, hobbies), both overall and on the day of the conversation. Examples of questions to ask during 'What Matters' conversations are included in Table 1. Ideally these conversations should be performed more than once, and the patient's responses should be communicated to all members of the care team [13]. Furthermore, it is important that these responses are documented clearly in a format that is easily accessible. This may include detailed notes in the patient's electronic health record (EHR), a write-in EHR template [21] or a regularly updated whiteboard in their hospital room [13,17].

**Table 1.** Examples of 'What Matters' guiding questions

*Guiding questions: understanding life context and priorities*

What is important to you today?  
 What brings you joy? What makes you happy? What makes life worth living?  
 What do you worry about?  
 What are some goals you hope to achieve in the next 6 months or before your next birthday?  
 What would make tomorrow a really great day for you?  
 What else would you like us to know about you?  
 How do you learn best? For example, listening to someone, reading materials, watching a video.

*Guiding questions: anchoring treatment in goals and preferences*

What is the one thing about your healthcare you most want to focus on so that you can do [fill in desired activity] more often or more easily?  
 What are your most important goals now and as you think about the future with your health?  
 What concerns you most when you think about your health and healthcare in the future?  
 What are your fears or concerns for your family?  
 What are your most important goals if your health situation worsens?  
 What things about your healthcare do you think aren't helping you and you find too bothersome or difficult?  
 Is there anyone who should be part of this conversation with us?

Adapted from [13].

### MEDICATION

A medication review as part of the 4Ms framework provides an opportunity for clinicians to identify polypharmacy, potentially inappropriate medications (PIMs), opportunities for deprescribing non-essential therapies, drug-drug interactions and optimize immunization [22]. In AFHS, a particular focus is on avoidance of medications that impact the other 4Ms. Deprescribing is the patient-centred process of intentionally reducing (or ceasing) the number of medications prescribed to a patient in accordance with the patient's treatment goals and objectives [23]. A pharmacist-led medication review is a key component of multidisciplinary geriatric oncology care and presents a tangible opportunity to provide AFHS within the 4Ms framework [22,24]. Guidance for conducting medication reviews in this population was published by the Young International Society of Geriatric Oncology (SIOG) and Nursing & Allied Health (NAH) Interest Group [25].

### MENTATION

Cognitive assessment as part of age-friendly healthcare aligns with the holistic assessment of older adults with cancer. The recently updated ASCO guidelines for older adults with cancer include recommendations for a practical geriatric assessment (GA) [26]. Recommendation 2.1 'A GA should include high priority ageing-related domains known to be associated with outcomes in

older adults with cancer to include assessment of physical and cognitive function, emotional health, comorbid conditions, polypharmacy, nutrition, and social support' [26,27]. Screening for cognitive impairment, delirium and depression, depending on the healthcare setting is a vital part of adequate GA and implementation of AFHS [20,28].

### MOBILITY

Screening for mobility impairments and falls risk is another important domain in the 4Ms framework [14,15] and in the recommended GA to guide the care of older adults with cancer [26]. As part of the 4Ms, this also means that older adults can move safely to maintain functional independence and do 'What Matters'.

### INTERSECTIONALITY

The 4Ms are designed to be implemented as a full set, as each component interacts with each other. For example the impact of inappropriate medications on mentation and mobility and the potential impact of mobility and physical activity on mental health highlight the importance of assessing all of the 4Ms collectively [20]. The provision of GA-guided interventions is another opportunity for improvement in the care of older adults with cancer utilizing the principles of person-centred, age-friendly healthcare [26,29].

### THE 5Ms

In an independent but simultaneous effort, the 5Ms of geriatrics care were introduced in Canada [30] and comprise the 4Ms with the addition of multi-complexity. The 5Ms can be used to communicate the core competencies in the field of geriatric medicine and the recognition of the complexity associated with delivering holistic care improves the age-inclusiveness and functionality of the AFHS framework [30,31].

### CHALLENGES IN IMPLEMENTING THE 4Ms FRAMEWORK

Asking 'What Matters' can be difficult for clinicians as it is crucial to frame the question in an easily understood way. Incorrect interpretation or oversimplification by the older adult may occur because of the complexity of the question [32]. A qualitative study by Nilsen *et al.* [33] investigated the feasibility of performing interviews that utilize the WMTY question in eliciting patient care preferences and goals related to transition from hospital to home. Although the WMTY question is intended to be an easily understandable PCC slogan, care staff reported difficulty in obtaining clear answers from

participants and translating responses into comprehensive goals and preferences [33]. Furthermore, confusion on the receiver front may have prompted the interviewer to define the WMTY question in more narrow terms, potentially limiting the scope of responses [33].

Another challenge is a lack of clear consensus on how to document 4Ms information within the existing medical record making it difficult for healthcare workers to navigate this information [34]. The additional time required to adapt EHRs to incorporate the framework has limited the establishment of AFHS programmes in many medical institutions [35].

### EVIDENCE OF SUCCESSFUL IMPLEMENTATION OF AGE-FRIENDLY HEALTH SYSTEMS

We reviewed the contemporary evidence on the outcomes associated with the successful implementation of AFHS across various healthcare settings from the past 18 months to August 2023 [21,36<sup>\*\*\*</sup>,37<sup>\*\*\*</sup>-40<sup>\*\*\*</sup>,41,42<sup>\*\*\*</sup>,43<sup>\*\*\*</sup>]. Age-Friendly Health Systems have shown significant effects on patient-related outcomes, enhancing the well-being and engagement of older adults. Implementing AFHS, integrating 'What Matters Most' conversations and documenting the responses, for patients aged over 65 years in ambulatory cancer care clinics was associated with improvements in patient satisfaction with care scores [21]. Following comprehensive staff training in the 4Ms framework, a large primary healthcare provider in the United States experienced an increase in the delivery of AFHS principles. Over 75% of older patients consistently rated their experience highly when asked 'What Matters Most' questions at this service [40<sup>\*\*\*</sup>].

Embracing AFHS reduced the length of stay and total direct costs of care of older patients with fractures managed by a geriatric fracture programme within a large tertiary hospital in the United States [38<sup>\*\*\*</sup>]. This programme highlighted the pivotal role of 'What Matters Most' conversations in building rapport with patients and fostering active engagement in their own recovery [38<sup>\*\*\*</sup>].

Transforming services using AFHS principles has also demonstrated impact on healthcare metrics and the broader healthcare system. Improvements were demonstrated in the primary care setting in metrics for falls, mobility and cognitive risk assessment, advance care planning, dementia caregiver education, mobility risk assessment and high-risk medication management [37<sup>\*\*\*</sup>,42<sup>\*\*\*</sup>]. Factors such as team member education [43<sup>\*\*\*</sup>], cultural change that favoured the framework's integration, and alterations to workflow to holistically consider all

elements of the 4Ms were crucial ingredients for the successful implementation [39].

## THE 4Ms IN CANCER CARE

There is a need to create healthcare systems to adequately manage the growing number of older adults with cancer [44]. The integration of geriatric assessment and guided supportive care interventions should be standard of care [26,27,29,44]. Utilizing the principles of AFHS in a cancer-care context provides an opportunity to shift the focus towards person-centred cancer care. Integration of the 4Ms into usual cancer care provides a tangible, practical universal framework for this process [39].

The Senior Adult Oncology Programme at the Moffitt Cancer Center in Florida developed a 4Ms implementation strategy as a quality improvement measure building on their existing geriatric oncology programme [17,21]. The 4Ms strategy was employed centre-wide, tailored to both the inpatient and outpatient settings. A key aspect was the empowerment of nurses [17]. Advanced care planning (ACP) was seen as a vital component of the 'What Matters' conversation and education of nurses about the importance of ACP was enabled by this strategy [43]. In inpatient care, 'What Matters' conversations were facilitated by the use of whiteboards. Delirium screening was routine and pharmacist consultations were provided to inpatients with a positive delirium screen. Inpatient mobility and falls assessment has always been important in the care of hospitalized older adults but gained enhanced attention with the application of the dedicated 4Ms model [17]. Outpatient clinics used conversation cards and WMTY templates during clinic visits. As part of a geriatric assessment, an outpatient pharmacist consult was used to address polypharmacy. Formal screening for cognitive impairment and depression was performed at baseline and mobility was addressed using a Timed up and Go at baseline and during treatment [17]. It is hoped that the systematic application of the 4Ms framework will reduce the cost of cancer care, improve the wellbeing of patients and 'position the organization to deliver the complex age-friendly cancer care of the future' [17].

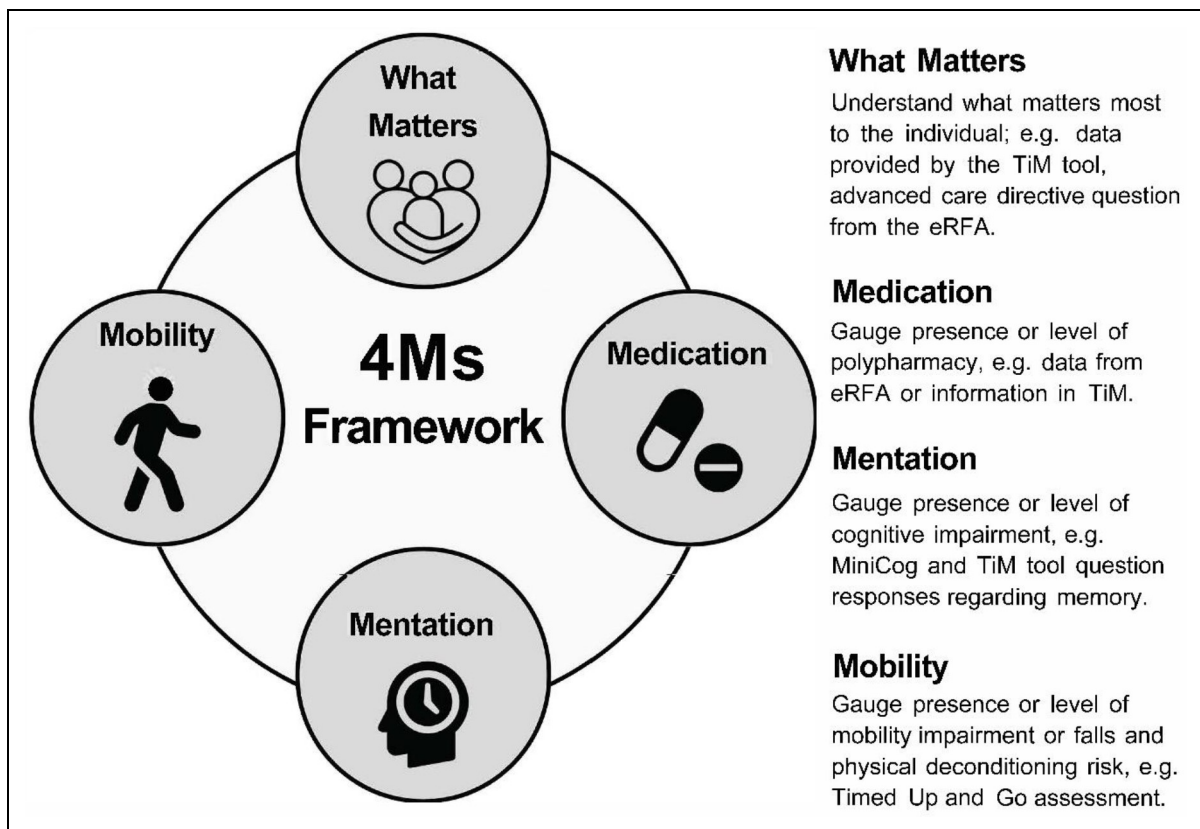
Clinical conversations around the question 'What Matters Most?' allows providers working with older adults to discuss goals around prognosis and end-of-life care decisions without removing hope [43]. ACP is an important part of the 'What Matters' component of the 4Ms framework in patients with cancer. A formal six step education plan for nurses about the importance of ACP was

implemented across 21 departments at the Moffitt cancer centre [43]. This resulted in an increase in the number of nurses who felt knowledgeable about ACPs and were comfortable in discussing an ACP with patients [43].

To enable the successful integration of the 4Ms in cancer care, quality improvement methodologies, as demonstrated in healthcare research, are pivotal for continually refining care processes, ensuring staff competence, and maintaining comprehensive documentation through health records [40]. Active engagement of healthcare providers, coupled with robust patient feedback mechanisms, solidifies the commitment to age-friendly care. Accreditation as an Age-Friendly Health Service [19] and recognition of this commonality of purpose across sites creates the opportunity for the formation of a community of practice [45].

Finally, it is imperative that cancer care centres recognize some of the barriers and pitfalls to implementation of the 4Ms framework. Implementing the 4Ms framework can be complex and requires breaking down the process into manageable components. This approach is necessary to ensure that the scope remains feasible and that healthcare systems can adapt gradually to age-friendly practices [36,46]. The implementation and adoption process can be lengthy and may extend over many years. Even in early-adopter health systems, not all 4Ms may be fully integrated, risking a loss of attention and support over time. It may take time to get buy-in from practitioners in often busy practices to complete necessary training and to foster the cultural shift that is required [46].

Among the 4Ms, the 'What Matters' component can be particularly challenging to implement in a meaningful way. Healthcare providers often struggle to frame conversations that elicit actionable responses, and there can be uncertainty about optimal documentation [36]. Solutions to this issue include the routine use of a GA [26,27] and education and empowerment of clinicians, especially nurses, to conduct WMTY conversations [17]. This can be enhanced by using patient reported outcomes and novel strategies such as the OlderCan 'This is Me' (TiM) tool [47]. This one-page tool was codesigned by consumers and records WMTY information like 'Things that are important to me are...' and 'Quality of life is more/less important than length of life for me' (Supplementary Appendix 1, <http://links.lww.com/COSPC/A37>). We have recently investigated the addition of patient-derived photographs to a routine multidimensional GA [electronic Rapid Fitness Assessment (eRFA)] [48,49]. This approach enables older adults to further express aspects of their identity and what



**FIGURE 2.** Adapting the 4Ms framework to geriatric oncology care at a regional cancer centre in Australia. eRFA, electronic Rapid Fitness Assessment [48,50]; TiM, This is me tool [47].

matters to them [49]. Fig. 2 is an illustration of what the 4Ms framework looks like when these tools are utilized at a regional cancer centre in Australia.

## CONCLUSION

Evidence supports the integration of the AFHS 4Ms framework in response to the growing ageing population. By seamlessly integrating clinical education, infrastructure development including geriatric assessment, cultural change and support, cancer care centres can overcome barriers and ensure the meaningful integration of the 4Ms framework. This comprehensive and collaborative approach not only enhances the quality of care but also promises to be the cornerstone of success for age-friendly, person-centred cancer care initiatives.

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## Conflict of interest

C.B.S. has received honoraria for advisory board membership and speakers fees from Astra Zeneca, Sanofi, MSD, BMS, GSK, Novartis, Ipsen and Janssen. For the remaining authors, there are no conflicts of interests.

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