



ELSEVIER

Contents lists available at ScienceDirect

Healthcare

journal homepage: [www.elsevier.com/locate/healthcare](http://www.elsevier.com/locate/healthcare)

Opinion paper

## Creating Age-Friendly Health Systems – A vision for better care of older adults

Kedar S. Mate<sup>a,\*</sup>, Amy Berman<sup>b</sup>, Mara Laderman<sup>a</sup>, Andrea Kabcenell<sup>a</sup>, Terry Fulmer<sup>b</sup><sup>a</sup> Institute for Healthcare Improvement (IHI), United States<sup>b</sup> The John A. Hartford Foundation, United States

## ARTICLE INFO

## Keywords:

Older adults

Age-friendly care

Health system transformation

Quality improvement

## ABSTRACT

Safe and effective care of older adults is a crucial issue given the rapid growth of the aging demographic, many of whom have complex health and social needs. At the same time, the health care delivery environment is rapidly changing, offering a new set of opportunities to improve care of older adults. We describe the background, evidence-based changes, and testing, scale-up, and spread strategy that are part of the design of the Creating Age-Friendly Health Systems initiative. The goal is to reach 20% of U.S. hospitals and health systems by 2020, with plans to reach additional hospitals and health systems in subsequent years.

In 1975, Dr. Robert N. Butler, the first director of the National Institute on Aging, wrote a Pulitzer Prize-winning book, “Why Survive? Being Old in America.” He discussed the “unfulfilled prescription” that described in graphic detail the myriad ways we create harm when we provide care to older adults.<sup>1</sup> Over forty years later, why aren't delivery systems better equipped to reliably provide safe and high-quality care to older adults across all care settings? The demand for health care from the older adult population will only continue to grow: U.S. Census data show that the population 65 and older is expected to nearly double over the next forty years, from 43.1 million in 2012 to 83.7 million in 2050.<sup>2</sup> This demographic shift is attributable to the aging Baby Boomer generation and increasing life expectancy: men and women today who reach the age of 65 can expect to live until age 85 and age 86, respectively.<sup>3</sup> Older adults frequently have complex health and social needs as they experience multiple chronic medical conditions and suffer from cognitive and physical functional limitations.<sup>4</sup> Together these affect their ability to independently perform activities of daily living and lead to poor outcomes and worse experience of care, as well as high costs for the individual and for the health care system from increased emergency department visits, inpatient hospitalizations, and care in skilled nursing facilities, among other cost drivers. While other high-risk populations share some of the same characteristics and challenges that can be addressed by increasing efforts to coordinate and tailor care for patients with complex needs, the combination of biological factors, social and emotional isolation, and the burden on caregivers makes care designs for older adults different from those for other complex populations.

With this growth in the number of older adults comes increased demand for health care services and long-term services and supports.

Current health care delivery systems are not adequately aligned with these complex needs, and care systems often fall short.<sup>5–8</sup> This is not for a lack of substantial, laudable effort. Dozens of models to improve care for older adults have seen improved outcomes in different care settings, but the spread and scale of these models have been limited.<sup>9</sup> This is the case even for models that have worked to change payment, such as the Program of All-Inclusive Care for the Elderly (PACE). Health systems are often implementing several different geriatric care models simultaneously that are focused on specific settings or sub-populations without making fundamental changes to embed better geriatric care within organizational culture and across the system. This focus on different models can be perpetuated by fragmented payment systems that incentivize treating discrete parts rather than the whole person. Fortunately, this is starting to change. As health systems move towards value-based payment arrangements and are taking on risk for defined populations, they will need to develop a more systematic approach to caring for the growing population of older adults to stay financially viable.

Recognizing these challenges, in November 2015, The John A. Hartford Foundation, having invested more than \$500 million in the development of geriatric experts and cost-effective models of care, determined that a social movement was needed to look beyond a model-at-a-time approach. Why a social movement? Nothing short of a social movement will enable all of us to address the growing number of older adults who need and will need person-centered, coordinated, location-appropriate care. To think of this as simply one more program will fall far short of our goal of Age-Friendly care for all older adults and their families. With this aim, The John A. Hartford Foundation established the Creating Age-Friendly Health Systems initiative in the U.S. Here we

\* Corresponding author.

<http://dx.doi.org/10.1016/j.hjdsi.2017.05.005>Received 13 January 2017; Received in revised form 19 May 2017; Accepted 22 May 2017  
2213-0764/ © 2017 Elsevier Inc. All rights reserved.

describe the background and key evidence-based changes that are part of the design of this initiative.

In an Age-Friendly Health System, health care-related harms to older adults are dramatically reduced and approach zero; older adults get the best care possible and are satisfied with their care; and value is optimized for everyone.<sup>10</sup> The Creating Age-Friendly Health Systems initiative builds upon a number of fundamental characteristics common to existing geriatric care models, including leadership committed to addressing ageism; reliable use of evidence-based care; staff who are specifically trained and proficient in the care of older adults; high-performing care teams focused on measurable outcomes; a systematic approach for coordinating care with other organizations and for engaging with patients and their families and caregivers; and a clear process for eliciting patient goals and priorities and using those goals to individualize care.

The goal of the Creating Age-Friendly Health Systems initiative is to reach 20% of U.S. hospitals and health systems by 2020 with an age-friendly approach to care, with plans to reach additional hospitals and health systems in subsequent years. In June 2016, The John A. Hartford Foundation partnered with the Institute for Healthcare Improvement (IHI), the American Hospital Association (AHA), leading geriatric care experts, and five innovative health systems to co-design a feasible and sustainable approach to making U.S. health care systems age-friendly. To achieve these goals, the Creating Age-Friendly Health Systems initiative requires a defined set of evidence-based interventions that, if implemented, would reduce harm to older adults and improve health outcomes while avoiding unwanted or duplicative care. In addition, ensuring the reliable execution of these interventions requires a set of foundational elements including leadership, teamwork, and information and communications systems. Importantly, the goal of the initiative is to improve care for older adults across all care settings: inpatient, post-acute, and in-home and ambulatory settings.

This first stage of Creating Age-Friendly Health Systems involved a review of the evidence to determine what interventions would improve care for older adults. This stage had three key steps: 1) consolidation of evidence and lessons from existing models for improving care for older adults; 2) understanding existing practice in U.S. hospitals and health systems; and 3) assembly of working groups.

- 1. Consolidation of evidence:** In August 2016 the Creating Age-Friendly Health Systems team conducted a research and review process and convened an expert meeting. This meeting brought together two dozen leading geriatric care experts, including many academic experts who have created evidence-based geriatric care models, health system leaders from four health systems (Kaiser Permanente, Ascension Health, Trinity Health, and Anne Arundel Medical Center), and additional stakeholders including the AHA and The Joint Commission. The expert meeting allowed researchers to synthesize the core elements of seventeen evidence-based models of care for older adults, identify common design elements and constraints, and develop a preliminary set of evidence-based interventions that, if implemented, would reduce harm and avoidable suffering for older adults in U.S. health systems.
- 2. Understanding existing practice:** The Creating Age-Friendly Health Systems team worked with the participating health systems to understand their existing efforts to provide age-friendly care, along with their barriers to effective implementation and spread. In each case, the health system conducted an inventory of current approaches to provide age-friendly care and, in most instances, multiple evidence-based models were in place in different settings across the health system. Part of what drives the health system leaders' participation is that they each see the need to move beyond the model-at-a-time approach and are committed to testing, implementing, and spreading the Age-Friendly Health Systems approach throughout the system not as yet another geriatric care model, but as a fundamental change in the way they operate in the

**Table 1**

Specific high-level interventions for the Age Friendly Health System 4 M Model.

		Specific high-level interventions
<b>What matters</b>	1	Know what matters: health outcome goals and care preferences for current and future care, including end of life <sup>11,12</sup>
	2	Act on what matters for current and future care, including end of life <sup>13,14</sup>
<b>Medications</b>	3	Implement standard process for age-friendly medication reconciliation <sup>15,16</sup>
	4	De-prescribe and adjust doses to be age-friendly <sup>17</sup>
<b>Mobility</b>	5	Implement an individualized mobility plan <sup>18,19</sup>
	6	Create an environment that enables mobility <sup>20</sup>
<b>Mentation</b>	7	Ensure adequate nutrition, hydration, sleep, and comfort
	8	Engage and orient to maximize independence and dignity
	9	Identify, treat, and manage dementia, delirium, and depression <sup>21–23</sup>

future.

- 3. Assembling working groups to refine and revise the content:** With this understanding of the evidence and application of the geriatric care models across the participating health systems, the Creating Age-Friendly Health Systems team, along with a working group of geriatric experts and health system leaders, have refined the core evidence-based elements, specific actions, and associated candidate measures for the Creating Age-Friendly Health Systems initiative. The four evidence-based core elements are known as the “4 Ms” and include mentation, mobility, medications, and (what) matters. These essential elements of high-quality care for older adults are indicators of a broader shift by health systems to focus on the needs of older adults. Table 1 shows the nine high-level interventions within each of the 4 Ms.

Along with reliable, evidence-based management within each of the 4 M's across care settings, the approach includes work on the foundational elements on an Age-Friendly Health System that will facilitate reliable implementation of the 4 Ms, including leadership commitment, a culture that supports age-friendly care, training for the care team in geriatric principles, caregiver engagement, infrastructure to support better care for older adults, and an information ecosystem that facilitates information sharing across settings, including patient goals and care preferences.

Achieving the goal of spreading the Age-Friendly Health Systems model to 20% of U.S. hospitals and health systems by 2020 will require a two-stage process. In Stage 1, we will test, refine, and scale-up the Age-Friendly Health System within five major U.S. health systems in two years. While the specific process and outcome measures are still under development by the Creating Age-Friendly Health Systems team and health systems, we expect to see reductions in the major drivers of clinical harm to older adults and in cost and utilization measures, and improvements in satisfaction scores for older adults. This stage will result in refinement of the evidence-based practices into a “spread-ready” Age-Friendly Health Systems model along with a set of implementation tools and accompanying guidance and measures. In Stage 2, this refined Age-Friendly Health Systems model will be spread quickly and with confidence to ultimately reach hundreds of health care delivery sites around the country through a national spread campaign to reach 1000 hospitals and health systems.

It is time for health systems to redefine how they provide care to their largest and fastest-growing demographic because it is the right thing to do and we can't afford not to. With this nationwide initiative, The John A. Hartford Foundation and IHI, in partnership with the AHA and leading health systems, are designing a practical way forward to ensure older adults across the U.S. have a safe and customized health care experience through 2020 and beyond.

**Conflict of interest disclosure statement**

None.

**References**

- Butler R. *Why Survive? Being Old in America*. New York: Harper Torchbooks; 1975.
- U.S. Census Bureau, P23-212. 65+ in the United States: 2010. U.S. Government Printing Office, Washington, D.C.; 2014. Available from: <<https://www.census.gov/content/dam/Census/library/publications/2014/demo/p23-212.pdf>>.
- Calculators: Life Expectancy - Social Security; 2017. Available from: <<https://www.ssa.gov/planners/lifeexpectancy.html>>.
- Abrams M. *NAM Workshop Series on High-need Patients*; 2016. Available from: <<https://nam.edu/wp-content/uploads/2016/12/Taxonomy-and-care-model-presentation-FINAL.pdf>>.
- Coleman EA, Boulton C. Improving the quality of transitional care for persons with complex care needs. *J Am Geriatr Soc*. 2003;51(4):556–557.
- Pham HH, O'Malley AS, Bach PB, et al. Primary care physicians' links to other physicians through medicare patients: the scope of care coordination. *Ann Intern Med*. 2009;150(4):236–242.
- Levinson D. *Adverse Events in Hospitals: National Incidence Among Medicare Beneficiaries*. Department of Health and Human Services Office of Inspector General; 2010. Available from: <<https://oig.hhs.gov/oei/reports/OEI-06-09-00090.pdf>>.
- Knight SJ. Bridging the gap at the center of patient centeredness: individual patient preferences in health care decision making. *JAMA Intern Med*. 2013;173:369–370.
- Malone ML, Capezuti EA, Palmer RM, eds. *Geriatrics Models of Care: Bringing "Best Practice" to an Aging America*. New York: Springer; 2015.
- Fulmer T, Berman A. *Age-friendly Health Systems: How Do We Get There?* November 3, 2016. Available from: <<http://healthaffairs.org/blog/2016/11/03/age-friendly-health-systems-how-do-we-get-there/>>.
- Tinetti ME, Naik AD, Dodson JA. Moving from disease-centered to patient goals-directed care for patients with multiple chronic conditions: patient value-based care. *JAMA Cardiol*. 2016;1(1):9–10.
- McCutcheon Adams K, Kabcenell A, Little K, Sokol-Hessner L. "Conversation Ready": A Framework for Improving End-of-Life Care. (IHI White Paper). Cambridge, Massachusetts: Institute for Healthcare Improvement; 2015 [Available at [ihi.org](http://ihi.org)].
- Tinetti ME, Esterson J, Ferris R, Posner P, Blaum CS. Patient priority-directed decision making and care for older adults with multiple chronic conditions. *Clin Geriatr Med*. 2016;32:261–275.
- Detering KM, Hancock AD, Reade MC, Silvester W. The impact of advance care planning on end of life care in elderly patients: randomised controlled trial. *BMJ*. 2010;340:1345–1354.
- American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 updated Beers Criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc*. 2015;63(11):2227–2246. Available from: <<http://onlinelibrary.wiley.com/doi/10.1111/jgs.13702/pdf>>.
- Hill-Taylor B, Sketris I, Hayden J, Byrne S, O'Sullivan D, Christie R. Application of STOPP/START criteria: a systematic review of the prevalence of potentially inappropriate prescribing in older adults, and evidence of clinical, humanistic, and economic impact. *J Clin Pharm Ther*. 2013;38:360–372.
- Frank C, Weir E. Deprescribing for older patients. *Can Med Assoc J*. 2014;186(18):1369–1376.
- Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. *JAGS*. 1986;34:119–126 [Tool available]. <<http://bodyworkshfr.com/files/2011/07/TinettiBalanceAndGaitAssessment.pdf>>.
- Agmon M, Zisberg A, Gil E. Association between 900 steps a day and functional decline in older hospitalized patients. *JAMA Intern Med*. 2017;17792:272–274.
- Hoyer EH, et al. Promoting mobility and reducing length of stay in hospitalized general medicine patients: a quality-improvement project. *J Hosp Med*. 2016;11(5):341–347.
- Inouye SK, Bogardus ST, Baker DI, Leo-Summers L, Cooney LM. The hospital elder life program: a model of care to prevent cognitive and functional decline in older hospitalized patients. *J Am Geriatr Soc*. 2000;46:1697–1706.
- Unutzer J, Katon W, Callahan CM, et al. Collaborative care management of late-life depression in the primary care setting. *J Am Med Assoc*. 2002;288(22):2836–2845.
- Reuben DB, Everston LC, Wenger NS, Serrano K, Chodosh J, Ercoli L, Tan ZS, et al. The University of California at Los Angeles Alzheimer's and dementia care program for comprehensive, coordinated, patient-centered care: preliminary data. *J Am Geriatr Soc*. 2013;61:2214–2218.