



## Aging in Community

### Developing a More Holistic Approach to Enhance Older Adults' Well-Being

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#### ABSTRACT

Public health advances have contributed to increased longevity; however, individuals are more likely to live longer with multiple chronic conditions. The existing health care system primarily focuses on treating disease rather than addressing well-being as a holistic construct that includes physical, social, and environmental components. The current commentary emphasizes the importance of supporting healthy active aging and aging in community. The barriers to aging in community and the state of the intervention science in response to this problem are discussed, and recommendations for future research are provided. Active aging is more than managing illness or care transitions—it promotes engagement, participation, dignity, self-fulfillment, self-determination, and support for older adults. To support aging in community and healthy active aging, a paradigm shift is needed in how the well-being of older adults is thought about and supported.

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Public health advances in the past century have contributed to an epidemiologic transition; people are living longer and are more likely to die from chronic and degenerative diseases than infectious or acute diseases (Kinsella, Beard, & Suzman, 2013). Increased longevity is a success story for population aging, but it also highlights society's structural lag in adapting to a shifting demographic and technological landscape (Hudson, 2010) and the importance of healthy active aging.

The World Health Organization (WHO, 2002, p. 12) defines active aging as “the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age.” An active aging framework stresses aging in community—to remain in one's own home or community in a safe, comfortable, interdependent, and engaged manner irrespective of age, income, or ability (Centers for Disease Control and Prevention, 2013). To support aging in place, societies need to maintain well-

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being in older adults (shortening the morbidity slope), enable participation and engagement, provide support when needed at the end of life, and promote health across the lifespan (Kinsella et al., 2013). However, rather than focusing on the contextual and social determinants of aging, the health care system has continued to primarily focus on one aspect of aging—physical health. This narrow focus and other critical barriers block the capacity for aging in community. The current commentary focuses on these barriers, the state of the science in response to this problem, and provides recommendations for future research.

## CHALLENGES

Our existing health care system primarily focuses on treating disease rather than addressing well-being as a holistic construct that includes physical, social, and environmental components. Much research has been conducted on the social determinants of health, such as socioeconomic status (SES). Lower SES or living in lower SES communities is associated with worse access to health care and other resources that promote well-being, such as transportation, quality nutrition, and recreational opportunities. Health care use is clearly affected by a lack of social and environmental support, which results in poor self-care or treatment adherence (Shier, Ginsburg, Howell, Volland, & Golden, 2013). Inaccessible, unsafe housing can decrease mobility and increase the risk of falls or isolation. These factors have a cumulative effect over the life course, resulting in poor functional status in older age, high comorbidity, and greater use of costly health resources (LaVeist, 2004). Yet, the health system struggles to tackle the complex, intersectionality of care needs that result from multiple chronic conditions developed over a lifetime.

Another key challenge is poor integration or coordination across systems of support including community-based health and social services for older adults. Acute, post-acute, and long-term care services are often distinct care centers, with different intervention goals and reimbursement structures. There is little integration between formal and informal care systems and communication is a challenge between care settings both formal and informal.

The overwhelming majority of elder care occurs in the community by informal care providers. Yet, much of the research is from the formal care system perspective. The relationship of formal and informal care is complicated by policies that do not consider the natural community system of elder care whereby neighbors, friends, and family members provide assistance to one another (Kelley, 2005a,b; Skemp, Maas, & Umbarger-Mackey, 2014). Although it is

important to prevent poor quality care and protect privacy, an understanding of the informal sector of health care, and the intersection of formal and informal elder care, is an important area for research and policy.

Health policy has contributed to this problem by continuing to focus reimbursements at the individual rather than the population or community level and specific providers (e.g., silo effect). The shift from fee-for-service to prospective payment and other reimbursement pilots in Medicare (e.g., Money Follows the Person, Medical Homes) is a positive step toward promoting holistic, seamless care. However, Medicare policy continues to focus on acute care rather than the more prevalent chronic care needs of the older adult population (Davitt & Choi, 2008).

## STATE OF THE SCIENCE: INTERVENTIONS

### Transitional Care Interventions

Historically, the health care system has been a series of silos through which patients, who are passive participants, must navigate with limited communication. Although not necessarily identified as a key decision maker in their own care needs, patients are typically left to be the coordinators of this complex care system, even when they may be frail or ill. Various care coordination interventions have been tested under the Medicare Coordinated Care Demonstration to determine whether care coordination could enhance patient satisfaction and quality care while reducing Medicare costs. The evaluation showed that only two programs generated significant reductions in hospitalizations but none of the programs had cost reductions to offset care management services (Brown, Peikes, Peterson, Schore, & Razafindrakoto, 2012). However, these interventions fared better when examining the impact on high-risk patients.

Nurse scientists have been at the forefront testing care coordination interventions, particularly as older patients transition between settings or care levels. Care transitions are critical junctures in an individual's health trajectory where communication and care continuity may be negatively affected. "Transitional care refers to a range of time-limited services and environments designed to ensure health care continuity and avoid preventable poor outcomes among at-risk populations as they move from one level of care to another, among multiple providers, and/or across settings" (Naylor et al., 2009, p. 1165). The Affordable Care Act's (ACA) Community-Based Care Transitions Program (CBCTP) provided funding for community agencies to partner with health care providers to enhance health outcomes for high-risk Medicare beneficiaries. Most care transition studies have demonstrated posi-

tive effects on post-discharge hospital readmission rates and lengths of stay, as well as time to readmission (Bryant-Lukosius et al., 2015). However, high-intensity interventions were more effective at reducing short-term (i.e., within 30 days or less) hospital readmissions (Verhaegh et al., 2014). Patient and caregiver effects were mixed with many early studies that did not find positive effects on patient functional status. Other studies have found benefits related to caregiver emotional and depression symptoms (Bryant-Lukosius et al., 2015), patient physical function, quality of life, and satisfaction with care (Naylor et al., 2013). Results related to cost savings due to better coordinated care were also mixed, with most studies being cost neutral given the increased cost of the intervention and research. Research on the Transitional Care Model (TCM) showed significant cost savings in both research-controlled (\$5,000 per older adult) and practice (\$2,170 per older adult) settings (Naylor et al., 2013). However, more studies need to be conducted in “real world” settings.

Most transitions interventions rely on professionals to provide care coordination, including advanced practice nurses (APNs), social workers, therapists, or some combination of professionals. Models vary in the level of intensity, with programs providing anywhere from one to 12 in-home visits after discharge, a combination of home visits and telephone contacts, and others providing only telephone contact post discharge. The most successful programs offer face-to-face contact with patients post discharge, reinforced with telephone follow up (Bryant-Lukosius et al., 2015).

Another approach to transitions focuses on self-management, empowering patients to be a more engaged participant in their care. The Care Transitions Intervention (CTI) provides one-on-one coaching of older patients beginning in the hospital and continuing post discharge. Coaches work with patients to impart skills in self-care and care management and to enhance communication between patients and providers. The CTI has been shown to reduce rehospitalizations and care costs (Coleman, Parry, Chalmers, & Min, 2006).

Several care transitions models have been tested within home health settings where they show positive impact on outcomes, such as rehospitalizations (Neff, Madigan, & Narsavage, 2003). Critical elements of successful models in home care include: caregiver involvement in care planning and communication, ongoing collaboration between multiple community providers, self-management training, and enhanced assessment (Parker, Zimmerman, Rodriguez, & Lee, 2014). The Centers for Medicare & Medicaid Services’

(CMS) new payment code for transitional care management should expand access to care management services. Requirements include patient contact by telephone or face-to-face within 2 business days, and patient visits within 7 to 14 days (Verhaegh et al., 2014).

Most of these models are still embedded in the traditional health delivery system with a focus on discharge planning for post acute care and prevention/reduction of hospital or other costly health care use. These models attempt to provide bridges between the acute setting and community, rather than developing a coordinated, seamless system of care. Furthermore, many of these models focus on only those older adults who are hospitalized rather than focusing on preventing deterioration or development of chronic conditions that result in greater use of health services.

### Overall Care Coordination Interventions

Other interventions have focused less on care transitions and more on overall care coordination of health needs and supports. The Geriatric Resources for Assessment and Care of Elders (GRACE) intervention targets low-income older adults and combines several innovations, including:

- integration of the geriatrics team within the primary care environment; in-home assessment and care management provided by a social worker and nurse practitioner team; extensive use of specific care protocols; utilization of an integrated electronic medical record and a Web-based care management tracking tool; and integration with affiliated pharmacy, mental health, home health, community-based, and inpatient geriatric care services. (Counsell, Callahan, Buttar, Clark, & Frank, 2006, p. 1137)

Evaluations of the GRACE intervention showed improvements in health-related quality of life measures and a reduction in emergency department (ED) visits and hospitalizations in the second year of the intervention study. These types of interventions have been shown to reduce functional decline and delay nursing home admission (Counsell, Callahan, Tu, Stump, & Arling, 2009).

Another model of care coordination relies on home health agency RNs to manage patient care (Rantz, Popejoy, Musterman, & Miller, 2014). Clients who received care from an agency that used RN care coordination had significantly improved clinical outcomes compared with individuals of similar case-mix in nursing homes. Monthly costs to Medicare were significantly lower (\$686) per Missouri Care Options clients with RN care coordination compared to those without care coordination (Marek, Stetzer, Popejoy, & Rantz, 2010). The program saved Medicare

and Medicaid \$1,592 per month in the intervention group (Marek, Stetzer, Adams, Popejoy, & Rantz, 2012). A modification of this program in independent living provides RN care coordination, regular health and functional assessments, prompt intervention, and long-term support that promotes independence, health, and function. Residents have positive health outcomes for fall risk, walking speed, functional ambulation, grip strength, physical health, and mental health. This program saved \$20,000 annually for nursing home-level residents (Rantz et al., 2011; Rantz et al., 2014).

Another model of overall coordination of chronic care patients is the hospital-at-home demonstration, which provides acute care in the patient's home. These models often work with affiliated home health agencies along with physician staff to provide more intensive services. Evaluation studies show positive impact on hospital use and other patient outcomes (Parker et al., 2014).

Although the ACA funded demonstrations to test various innovations in care coordination and seamless care, Medicare still does not cover many of the supports that older adults need to remain in their homes or communities, such as assistance with activities of daily living (ADLs). The Medicare-funded CBCTP attempts to provide incentives for medical providers to connect with community-based organizations that provide social services for older adults. However, the main focus of this program is still on reducing hospital readmissions and other costly health services. New approaches, such as accountable care organizations or medical homes, ideally will move the system toward a more seamless approach to health care. However, many of these innovations are not designed to address the social determinants of healthy aging, including "the essential role of social supports in contributing to patients' health, safety, and well-being" (Shier et al., 2013, p. 544). In fact, the initial evaluation report of the CBCTP noted that sites more likely to meet outcome targets (e.g., reduced readmissions) will need to provide or contract for elder support services (CMS, 2015).

Technology is another important area with potential to enhance aging-in-place capacity. Telehealth care has been touted as a way to enhance patient coordination and communication to catch problems early and save system expenditures. The results are mixed, however, with improvements in hospital use over the short term but not long term. More recent studies show no differences between treatment and control groups with regard to reduced health care use for telehealth recipients (Madigan et al., 2013). Virtual home health visits, on the other hand, have

shown positive benefits in terms of costs and use, as have "just-in-time" electronic reminders for home health nursing staff (Institute of Medicine [IOM], 2015).

A newly emerging technological approach is under way that uses environmentally embedded (non-wearable) sensor technology to unobtrusively and automatically monitor functional status of older adults, detect potential changes in health or functional status, and send early alerts to health care providers (Skubic, Guevara, & Rantz, 2015). Discrete, inexpensive motion sensors, an under the mattress sensor, and a small depth image sensor that uses non-identifiable images are installed to monitor respiration, pulse, and restlessness as individuals sleep. Gait speed, stride length, and time are calculated daily and automatically assess for increasing fall risk. Continuously running computer algorithms applied to the sensor data send alerts to staff days or weeks before typical signs or symptoms are detected by the individuals, family members, or providers. With this sensor technology, RN care coordination and decision making is enhanced and environment becomes part of the intervention equation.

Because older patients have complex care needs, one discreet practice modification may not be adequate to effect significant patient-level change. In fact, research shows that successful home health agencies used an average of six strategies to improve quality and patient outcomes. CMS-sponsored initiatives under the 8th Scope of Work (SOW) led to a national campaign in home health care to incorporate best practices to reduce avoidable hospitalizations, including:

- (a) hospitalization risk assessment, (b) patient emergency plan, (c) medication management, (d) phone monitoring/frontloading visits, (e) teletriage, (f) telemonitoring, (g) immunization, (h) physician relationships, (i) fall prevention, (j) patient self-management, (k) disease management, and (l) transitional care coordination. (Parker et al., 2014, p. 25)

This campaign led to a 1% reduction in hospitalizations in participating agencies. Research also suggests that certain agency characteristics are more conducive to quality care and better outcomes, such as visit frequency, care continuity, and positive work environment. One study found that lack of care continuity is a prevalent problem for home health care patients of color (Davitt, Bourjolly, & Frasso, 2015).

One promising trend is programs that proactively consider social factors and engage social systems in their approach to enhancing the well-being of older adults. These programs conduct both health and social assessments at baseline. They feature interdisciplinary care teams that

provide ongoing care management guided by individual care plans specific to each participant, medication management, use of electronic medical records, and facilitate communication with primary care providers. Other key features of these programs include: specialized training for providers, self-care coaching, specialized intervention protocols, referral for social supports, and mental health services. Evaluation studies show that these models have substantial impact on health care use with reductions in inpatient care use ranging from 17% to 26% and reductions in ED use and costs for intervention participants (Shier et al., 2013).

The Program of All-inclusive Care for the Elderly (PACE) is an example of an on-site holistic approach with overall coordination by an interdisciplinary team and integration of social supports. PACE evaluations show that enrollees have lower rates of nursing home admission, hospitalization, and report better health status and health-related quality of life. The PACE model seems to have the greatest impact on older adults with high levels of functional impairment (Chatterji, Burstein, Kidder, & White, 1998). This program is limited to the most frail (e.g., nursing home-level care needs) and those with low incomes.

### Healthy Aging Community Interventions

*Disability* refers to the gap between one's resources and environmental conditions (Lawton, 1990). Interventions that neglect environmental barriers fail to consider a critical component relevant to aging in place. Nurse researchers are studying the impact of interventions that are focused on environmental as well as individual level change. The CAPABLE (Community Aging in Place, Advancing Better Living for Elders) model combines an interdisciplinary team (RNs and occupational therapists) with a handy person, with a patient-centered approach to care management and a focus on the patient's social and physical environments. The focus is on slowing functional decline and thus staving off premature institutionalization by providing interactive assessments, attention to self-care management, and patient-centered goal development and solutions (Pho et al., 2012). Patients receive a total of 10 visits over 6 months from CAPABLE staff. The professional staff work with the handy person to identify necessary environmental modifications. CAPABLE has been shown to reduce functional impairments by more than one full ADL limitation in pilot studies (Szanton et al., 2014).

Culturally informed community capacity for healthy aging (CIHA) nursing strategies have effectively engaged community members and translated evidence-based aging

practices to the community context in immigrant, rural, and international settings (Dreher & Skemp, 2011; Skemp et al., 2014). Further evaluation is needed to measure intervention outcomes of the CIHA, as well as describe the process for partnering with and sustaining these healthy aging community interventions.

On the other end of the spectrum are community-based, voluntary sector programs (e.g., naturally occurring retirement community supportive services [NORC-SSPs], Villages) that attempt to fill the gaps in social and environmental supports to enable aging in community. These models stress older adult active engagement in the program, offer supports based on member expressed need, and capitalize on the informal care sector. However, few evaluation studies have been conducted on these programs, thus their effects on functional status, health care use, or health-related quality of life are unknown (Scharlach, Davitt, Lehning, Greenfield, & Graham, 2014; Skemp et al., 2014). Challenges related to these models include ensuring equitable access to such programs (within and across communities), community-level capacity deficits, community buy-in, capacity to support high-need members, and ongoing program funding and sustainability (Davitt, Lehning, Scharlach, & Greenfield, 2015).

### RECOMMENDATIONS

Active aging promotes engagement, participation, dignity, self-fulfillment, self-determination, and support for older adults. Active aging is more than managing illness or care transitions; it requires a proactive, holistic approach to health care. Thus, research needs to focus on how to adapt systems of care to prioritize functional status, as defined by the patient, prevent deterioration, and promote overall wellness.

An active aging approach also requires a highly integrated system of support incorporating formal and informal sectors, and social and health systems, to effectively address the well-being of older adults (WHO, 2002). Successful integration requires sound communication strategies. Face-to-face communication was found to be pivotal to care coordination interventions as was a communications hub (i.e., the care coordinator). Communication is key to care continuity and needs to be patient-centered (i.e., patient goal driven), offer comprehensive patient education empowering the patient to participate in self-care, and provide ongoing guidance and support to the patient and informal caregivers. Researchers need to study effective approaches to communication across disciplines, care settings/systems, and care providers (most importantly,

the patient) to promote the highest quality care that is responsive to the goals and preferences of the older adult.

The existing health care approach fails to fully account for the fact that aging is done within environmental contexts and over the lifespan. Healthy aging requires access to healthy environments not only in older years but over the life course. The present model of individualized care fails to connect to the factors that influence well-being, from healthy communities with adequate resources to safe spaces that promote healthy living and social engagement. Research has clearly documented resource gaps (e.g., food deserts, walkability challenges, inadequate transportation, high crime rates) in many communities, particularly those populated by vulnerable older adult populations (e.g., low SES, individuals of color). Likewise, environmental challenges to healthy aging can be seen in many older adults' homes, with inaccessible housing and in-home barriers that increase fall risk. Social and economic disparities in access to healthy environments have also been well-documented (Davitt, 2012). Environmental technology, such as embedded sensors, telehealth, and other non-wearable and wearable technologies, have tremendous potential to offer new solutions to some of the most persistent problems of aging. Everyday life technologies (e.g., home adaptations) are important to maintaining function. Additional research is needed to understand what interventions impact the social determinants of healthy aging that contribute to health and functional status decline in older adults. Therefore, future research needs to engage and partner with civic society, communities, and older adults to enhance the understanding of integrated systems that function at the community or population level.

One key challenge that cuts across all of these research endeavors is the ability to translate these results to a practice setting. In one real-world test, research APNs, who were not hospital employees, could not work with patients while they were still hospitalized, which is a key component in the success of the transitional care model (Naylor et al., 2013). Sustainability and scalability is also affected by the variations in needs and resources (e.g., availability of APNs in rural communities) from one community to the next.

An important aspect to any quality improvement effort will be quality data collection and ongoing data mining to enhance understanding of care processes and patient outcomes (Rantz et al., 2015). This effort will require a continuous quality improvement mentality learning from existing practices to enhance effectiveness. Finally, some improvements have been achieved via robust data collection and analysis practices, including public reporting of care processes and outcomes.

## CONCLUSION

Fixing programs at the margins will not be sufficient (IOM, 2015). To support aging in place and active aging, a paradigm shift is needed in how the well-being of older adults is thought about and supported. First, the scope needs to be adjusted from short term to long term. Individuals age over a lifetime and within environments that may be more or less conducive to healthy aging. Developing livable communities that enhance well-being for all requires attention to transportation, housing, community planning, and other forms of policy. Second, success has been achieved with dedicated attention to health transitions. However, there is a need for long-term support after the transition ends or for support before a hospitalization ever occurs.

Innovative programs are being tested via Medicare demonstration funding. However, these innovations are reaching only a small fraction of older adults. Also, the existing reimbursement structure does not support the added costs for intensive care management and team care, even if this will save costs in the future. Furthermore, one size may not fit all communities or populations; program adaptability will be key. Most importantly, Medicare does not cover many of the supports that older adults with multiple chronic conditions need: those that assist with functional capacity, such as personal care, or home modifications.

Researchers and policy makers need to work together to overcome these challenges by building a system that supports holistic well-being and integrated care, a patient-centered life-span approach, a continuous quality improvement mindset, a focus on the functional needs of patients, and compression of the morbidity slope.

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