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Keywords

aging in place, ageing in place, age-friendly community, public-private partnership

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Abstract

Declining public resources necessitate collaboration between public and private investors in order to meet the demands of an aging society to ‘age in place.’ Aging in place is a term that has emerged in the past ten years to describe older people’s desire to stay in their home and community. This paper presents an overview of aging in place and the role of public-private partnerships in finding solutions. Examples illustrate the common elements of successful existing partnership models for future replication. Additional opportunities for innovation demonstrate that much more can be done to meet the needs of the aging population and honor their preference to age in place.

Keywords: aging in place, ageing in place, age-friendly community, public-private partnership

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The population of adults age 65+ grew over 15 percent in the last decade, yet the largest growth occurred in individuals age 85+ (Johnson 2017). It is estimated that by 2050, those age 85+ will constitute one-fifth of the older US adult population (Ortman 2014). This demographic shift prompts numerous social and economic concerns. One important question is where older adults, particularly the oldest old, will reside, given that most older adults value their ability to maintain independence and prefer to remain in their home and community.

There is a pressing need for home care and other community-based services to enable older adults to live safely and comfortably in their home and community (Farber et al. 2011). At the same time, the number of family members available to care for elders at home has declined, and the number of professional and paraprofessional workers trained to care for elders at home has fallen. Although most (84 percent) of older adults depend on family members for care (Herbert 2019), the projected decline in family caregiver support, referred to as the family-care gap, raises additional questions about who will care for the growing number of older adults hoping to age in their homes (Gaugler 2020). Changes in family composition and geographic dispersion have resulted in many older adults living alone as they age, hoping to remain in their homes as long as possible (Mather 2015). Often geographically separated due to educational and job opportunities, working children struggle to provide care for their aging parents from a distance. Concerns about the well-being of an aging family member eventually trigger worried relatives to move an older adult into an institutional care setting. As a result, many older adults seek unsatisfactory and costly institutional care, rather than the home and community-based care that they would prefer.

This paper explores the concept of aging in place and summarizes opportunities for public-private partnerships (PPPs) in this arena. We first provide a description of ‘aging in place,’ and

then we review several challenges to supporting older adults in their home and community. This is followed by a review of successful PPP models of aging in place, comparing the features of each. We conclude with an assessment of prospects for the future.

Aging-in-Place

Close to 90 percent of older adults in the US express the goal of aging in place, and an estimated 80 percent of persons age 65+ live independently in their own homes (Farber et al. 2011). ‘Aging in place’ is a term that has emerged in the last decade to describe people’s desire to stay in their home as they age. It is defined as the ability to live in one’s home and community safely, independently, and comfortably, regardless of age, income, or ability level (CDC 2017). Aging in place has two aspects, physical and social, and is more than staying in one’s home. A goal of aging-in-place services is to improve and sustain the interactions between older adults and the larger community environments. Efforts to promote aging in place ‘enhance well-being and quality of life for older people at home and as integral members of the community’ (Thomas and Blanchard 2009: 12).

The three core elements in models of aging in place include attention to individual preferences, to the built environment, and to the availability of community-based services supporting health and well-being (Bigonnesse 2019). Aging-in-place models allow older adults to age in the least restrictive environment of their choice, and these have demonstrable economic and financial benefits. Therefore, aging in place is considered the preferred residential alternative to the current fragmented models of long-term care (Marek et al. 2012; Popejoy et al. 2015). Rather than requiring older adults to move from one setting to another as their care needs change, aging-

in-place models provide the necessary services that older adults may eventually require in the home so there is no need to move to a different place.

Challenges to Aging in Place

Despite elders' preferences for aging at home and in community, three factors make this challenging: (1) illness and disability rates among older adults; (2) poor housing conditions; and (3) limited financial resources. As a result, the choice to age in place becomes a function of older adults' resources and the range of programs, services, and settings available to them.

The acute or gradual accumulation of illness and disability is the first leading challenge to aging in place, regardless of sex/gender or race/ethnicity. Over 95 percent of adults age 85+ have at least one chronic condition (Centers for Medicare and Medicaid Services 2013); 73 percent have at least one disability (He 2014); and 43 percent of people age 80+ report having mobility limitations (Herbert 2019). Approximately 70 percent of those age 65+ will require extensive health care services during their lifetime (Genworth Financial, Inc. 2015; Osterman 2017). Approximately 40 percent of older adults have some type of age-related difficulty that constrains their ability to fully engage in activities of daily living (ADL) or instrumental activities of daily living (IADL). Fifteen percent of adults age 85+ report difficulty with cleaning, preparing meals, grocery shopping, or transportation, and another 60 percent struggle with at least one activity of daily living such as bathing, toileting, dressing, or feeding themselves (Centers for Medicare and Medicaid Services, 2013). Between 10 and 15 percent report difficulties with hearing or vision, and one quarter of older adults report difficulties going in or out of their homes.

The built environment and housing conditions in many communities serve as the second challenge to aging in place (Lehning 2012). One reason is that most communities were designed

for a mobile and non-disabled population. The need for residential and commercial spaces within walking distance is rarely considered in most urban planning or new building construction efforts. Instead, most communities are organized to accommodate active, non-disabled adults without attention to the supportive social and physical environment needed by older adults. (Herbert, 2019). Over 40 percent of the housing units occupied by older adults were built in 1969 or earlier, and often the supportive qualities of these homes receive little attention. Only 3.5 percent of homes in the US offer single-floor living, a no-step entry, and extra wide halls and doorways that can accommodate a wheelchair and other mobility devices (Herbert, 2019).

As a result of these challenges, effective strategies are needed to foster and facilitate age-friendly renovations across the diverse range of the aging housing stock (Cohen, 2016). These include systematic home assessments, increased public awareness about the role of the environment, and the creation of programs providing affordable home modification and repair services. In many cases, major renovations are required, but with the average costs of renovations estimating \$50,000, these modifications can be cost-prohibitive particularly for minority populations (Johnson and Appold 2017). Home retrofitting offers one solution to accommodate older adults continuing to live at home as they age, but only a fraction of home renovators are ‘aging-in-place’ certified, meaning they have special training to provide remodeling of housing for older adults.

Low financial resources are a major drawback to meeting the social and physical needs of an aging society, and are the third leading challenge to aging in place. Over half of the US population is at risk of not having enough money to maintain their standards of living in retirement, and 52 percent of households age 55+ are estimated to have no retirement savings (US Government Accountability Office, 2015). Over 20 percent of married social security recipients and 43 percent

of single recipients depend on social security for 90 percent or more of their income (Dushi et al. 2017). Over 30 percent of older adults report having no money at the end of each month or report debt after meeting essential expenses. As a result, many older adults who wish to age in place may lack the monetary resources to pay for in-home care and must rely on the support of family.

The Role of Public-Private Partnerships

New funding models are needed to provide financially viable aging-in-place models (see Munnell et al. 2021). Public-private partnerships can help by allowing private sector companies to collaborate with the public sector. Given the demand for aging-in-place models, public-private partnerships in which the private aging and housing sectors assist the public health and social service sector to address aging-in-place challenges have received significant attention, as this collaboration allows for increased investment of time, money, and focus (White House Conference on Aging 2015). In the next section of this paper, we review existing examples of PPP aging-in-place models. The core features of the models are compared in Table 1.

Table 1 here

Tiger Place Institute was developed at the University of Missouri in 2004 to create a cost-effective alternative to nursing home care. It is an aging-in-place model offering integrated care coordination and healthcare services to older adults living in specially designed apartments or in their own homes. (Rantz 2008). Core features include:

- A built environment with attention to improving health outcomes, mobility and independence, and involvement in life and community activities;
- Integrated care coordination and on-site healthcare services;
- Health-monitoring technology for early detection and treatment; and

- Environmentally-embedded sensor technology to identify falls and fall risk, and prolong independence.

Tiger Place Institute's public and private stakeholders include the University of Missouri, AmeriCare, and the Cerner Corporation (a NASDAQ-traded health care and information technology firm).

Program of All-Inclusive Care for the Elderly (PACE) is a patient-centered, integrated care and social support model. PACE operates as both an insurer and provider that assumes full risk for medical care and long-term services for adults age 55+ who are sufficiently frail to be categorized as 'nursing home eligible' by their state's Medicaid program. Program benefits include the following Medicaid- and Medicare-covered services:

- Built environment with on-site dentistry, primary care and medical specialty services, physical and occupational therapy.
- Community-based services including meals and nutrition counseling, home modifications, home care, transportation, recreational therapy, and social work counseling.

The PACE model is evolving, and becoming more flexible in its design. Historically, PACE programs were operated by nonprofit organizations, but they are now open to private investment. Approximately 10 percent of the over 135 PACE's programs in the United States are currently operated by for-profit companies (Clark 2016; Gleckman 2019).

Westchester County Public-Private Partnership for Aging Services (WPPP) was launched in 1991 as a partnership of government, business, and voluntary service agencies, with a mission to improve the quality-of-life for a diverse, aging population through creative programming. This umbrella organization asks corporations to contribute funds, sponsor specific programs, and donate in-kind support for local community initiatives.

New York State's Westchester County residents age 85+ are the county's fastest growing sector, and over 90 percent of Westchester County's older residents report the desire to age in place. At the same time, over one quarter of the older residents are women who live alone, and about 9,000 seniors in this area live below the poverty level, with over 37,000 senior households having less than the income needed to afford rent. Examples of programs developed by the WPPP to address these needs include:

- Health for Life, 6 week peer-learning programs;
- Age-Friendly Networking Conference;
- Livable Communities Villages (304 villages);
- Livable Communities Collaborative (18 groups);
- Annual Senior Hall of Fame Awards gala;
- Annual Salute to Seniors Business Expo;
- CarePrep caregiver training and education; and
- Telehealth Intervention Programs for Seniors (TIPS) that delivers remote patient monitoring with help from college students trained in a 'high tech meets high touch' approach for intergenerational care.

WPPP's innovative programming has been adapted by other communities around the country. It is one of the founding members of the WHO Global Network of Age-friendly Communities in the USA. Participating organizations and companies include local government agencies; businesses such as hotels, insurance, legal, and financial firms; and non-profit organizations such as the Jewish Federation (Westchester County PPP Annual Report 2018).

Village to Village (VtV). The Village to Village model was initially developed by Beacon Hill Village (BHV), a grassroots organization located in Boston. BHV offers fee-paying members

preferred access to social and cultural activities, health and fitness programs, household and home maintenance services, and medical care, by negotiating and partnering with regional service providers. The goal of the VtV is to offer members all the benefits found in an independent or assisted living facility, without requiring them to move from their homes. Core features of VtV include:

- Comprehensive, coordinated approach to home-based and community services on a one-stop-shopping basis;
- Use of a consumer-driver organization model that requires membership fees, though some villages have attempted to provide scholarships or reduced rates to increase low and moderate income elders' access;
- Provision of information about resources and providers, and assistance with transportation and grocery shopping, covered by membership fees;
- Home care services, home repair and maintenance services, and other services, paid for privately on a fee-for-service basis, usually at a slightly (around 20%) discounted rate negotiated by the village on behalf of members;
- A wide variety of community-building activities, including interest groups, exercise classes, cultural and educational field trips; and
- Organized volunteerism, with members helping each other or organizations in their community. Some villages use a 'time banking' model to structure their volunteer time.

Since its founding, BHV has collaborated with NCB Capital Impact, with funding from the MetLife Foundation and other sources, to develop a VtV Network that offers web-based assistance for communities seeking to establish their own villages. Philanthropic organizations, such as the

SCAN Foundation and the Archstone Foundation, have also invested in developing and evaluating Villages in other areas of the US (Clark, 2016).

Naturally Occurring Retirement Communities (NORCs). Similar to the Beacon Hill Village model, NORCs are community-level initiatives that bring together older adults and diverse stakeholders within a residential area (e.g., an apartment building, neighborhood, town) with a large number of older adults, to facilitate and coordinate a range of activities, relationships, and services to promote aging in place (Greenfield et al. 2012). NORCs refer to locations that were not planned as senior housing, yet, over time, have developed a sizable proportion of older residents due to long-time residents remaining in their homes throughout later life, as well as in-migration of older adults.

The first NORC with ‘supportive service programs’ – known as a NORC-SSP – was the Penn South Houses Program in New York City. Started by the United Hospital Fund in 1985–86 with funding from the UJA (United Jewish Appeal) Federation, the Penn South program became a model for others to follow and customize to their own communities. Today, there are NORC-SSP programs in 25 American states that are part of the National NORCs Aging In Place Initiative organized by the United Jewish Communities. In New York State alone, there are now 41 sites that have adopted this model and secured state and municipal funding to build the scope of services offered. NORC programs aim to create partnerships among diverse stakeholders—including residents, local government, housing managers and owners, and local service providers—to coordinate services and programs for residents within communities designated as NORCs (Vladeck 2004). The key components of the NORC model include:

- A geographical location where many elders live close to each other but have little previous social connection to one another before the NORC. NORCs are most commonly found in urban areas but may also be located in a rural area;
- A multi-generational, age-integrated building or neighborhood, where younger residents can interact with elders and in some cases provide assistance, while elders share their skills and experiences with the youth;
- Empowered elders through active involvement and planning of services and governance; and
- Partnerships with one or more local service providers – social services, health care services, educational and recreational opportunities, volunteer opportunities, and services such as transportation and home repairs.

NORC programs have secured both private philanthropic and local government funds to support the expansion of the model to other areas throughout the US.

Interim Healthcare Aging-in-Place Program. Interim Healthcare is a private equity based venture in partnership with Medicare that is comprised of a franchise network of homecare, senior care, home health and hospice and health care staffing services. Interim Healthcare's Aging in Place program provides reimbursement to Medicare-certified facilities where the older residents are 'homebound' by Medicare's definition. The program focuses on companionship, preparing meals, running errands, helping with activities of daily living, and transportation needs. Facilities are provided with nurses, home aides, therapists, and companions. Medical services are offered, such as wound dressing, physical therapy, healthcare education, and medication reminders.

Public-Private Partnerships in Other Countries

In addition to these US-based examples, other countries have also leveraged PPPs to advance models of aging in place adapted to the specific needs of their societies. In some countries, such as Japan and the Netherlands, public-private partnerships are the norm, and the boundaries between public and private enterprise are blurred. Many of these experiments in social innovation are promoted as part of the World Health Organization's Global Network for Age-friendly Cities and Communities (World Health Organization 2018). Examples from Japan and France are provided below.

Japan has adapted the western-style convenience store to provide a range of services beyond those offered in the US. Since they are now in every town throughout the country, they serve as community hubs that reach deep into isolated rural areas. 7-Eleven, for example, provides healthy, cooked meals with free delivery, utility-bill payment, and package pickup services. Another government initiative is subsidizing a pilot program of mobile convenience stores to reach even the most remote mountain villages.

Akita-city, in the mountainous northeastern region in Japan, created an 'Age-Friendly Partner Program' to serve as a model throughout Japan. In their public-private model, the municipal government acts as an umbrella organization providing support for 88 local, privately-owned firms, delivering a variety of services to the aging population. For example, Minamiyama Daily Service company trains community health workers to make weekly milk deliveries while also checking on the condition of each person. The workers offer nutritional advice, ask about elders' needs, and help prevent social isolation (World Health Organization 2018).

Dijon, France. Aging in place not only means staying in one's home, but also having access to the local community. Dijon's age-friendly initiatives are city-wide services and activities that allow their elders to continue to contribute to the city's civic and social life. Dijon is a medium-

sized city in the Franche-Comté region of France. About 22 percent of the population is age 60+ and those age 85+ has doubled over the past 20 years. Dijon's age-friendly initiatives assume an intergenerational approach with a variety of stakeholders including private firms, public agencies, academic institutions, and individual citizens. The partnership has invested heavily in transportation and mobility infrastructure for seniors. The city has also pedestrianized certain areas and enhanced accessibility of its tram platforms, improving access to the city center. Benches and chairs have been added and pavement curbs lowered, to increase walkability, and public toilets have been provided. A new opportunity for social interaction has been created through a seniors' restaurant initiative. Participants are transported by professionals and volunteers from their houses to a neighborhood restaurant for sociable group meals. In addition, a 'mobility day of activities' encourages Dijon residents to remain mobile as they age through the use of mobility aids adapted to needs and capacities. Dijon's residents have the opportunity to try different modes of transport, such as bicycles, tricycles, electric bicycles, and motorized scooters, and to learn more about the different mobility aids that are available as they age (World Health Organization 2018).

Technology Opportunities for Public Private Partnerships in Aging in Place

Meeting the aging-in-place needs of millions of aging individuals with different incomes, health conditions, and diverse living situations is complex with no one-size-fits-all solution. While there is no 'typical' older adult, there are traits, preferences, and physical realities that are common for older adults. Surveys of older adults suggest that opportunities for physical activity, safety, and socialization are important priorities for individuals seeking to age in place (Nielsen 2014). Nevertheless there are gaps between the services available compared to those that older consumers actually need and want.

To address this market demand, the coming years are likely to witness a huge increase in the types of technological advances for Baby Boomers determined to age in place. Beyond the aging-in-place models presented in this paper, additional innovation opportunities for shared public-private investments to keep older adults in their homes longer offer huge potential social and financial benefits to individuals and society. Examples of age-tech innovations that support aging in place range from technologies that promote health awareness via wearable health trackers or sensing technologies, to help from the ‘gig’ economy where collaborative consumption business models provide meal or medication delivery, as well as transportation services. These new technologies, developed by private startups in partnership with government and/or academic institutes, offer potential approaches to meeting the care needs of older adults who wish to age in place (Kim 2017; Ward 2016).

Conclusion

Innovative financial models are needed to support new models of aging in place (see Munnell et al. 2021). Most older adults today prefer to age in place, and this is unlikely to change in the future. The examples of PPPs in this paper summarize current practices and trends, yet there is much more that can be done to leverage financial investments to meet the health and housing needs of the aging population and honor their preference to age in place. Future efforts to strengthen the cooperation between public and private partners in aging in place will require understanding the needs of older adults in terms of the built environment and the need for coordinated, affordable care so that it is possible for older adults to remain in their homes, access personal care services and health care, and facilitate meaningful social connections.

Private industry may be well positioned to innovate on existing models if they better understand the changing market dynamics and preferences of the aging demographic. The opportunities to age in place in the future will be impacted by the increasing diversity of health, housing and social needs of older adults. While the current older adult population in the US is predominantly white, it will become far more heterogeneous in the next 20 years and will require diverse models of aging in place to meet a range of housing, health and social needs (Johnson and Parnell 2017). Collective impact will only be achieved through the commitment of key stakeholders from different public and private sectors (e.g., healthcare, housing, technology) coming together to promote aging in place that is inclusive of all older adults.

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Table 1. Examples of Public-Private Partnership Models Facilitating Aging in Place

	<i>Built Environment</i>			Community-based Services				
	<i>Healthcare</i>	<i>Housing</i>	<i>Transportation</i>	Social services & supports	Activities of daily living	Socialization	Food	Technology
TigerPlace Institute	x	x	x	x	x	x	x	x
PACE	x	x	x	x	x	x	x	
Village to Village		x	x	x	x	x	x	x
Westchester County	x	x	x	x	x		x	x
Interim Healthcare, Inc.	x	x	x	x	x	x	x	
NORCs	x	x	x	x		x		

Sources: Centers for Medicare and Medicaid Services (2013); Westchester County PPP (2018); Greenfield, et al. (2012).