Understanding the Social Impacts of Neighborhood and Home Design for Older Adults in Portland, Oregon

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Executive Summary

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Portland, Oregon's population is growing, diversifying, and aging. Post-World War II planning and policies were, in part, intended to support the large baby boom cohort born from 1946 to 1964, through family housing and auto-oriented environments; in 2011, the first Boomer turned 65. In 2018 and beyond, the proportion of older adults in Portland, Oregon, the U.S., and the world continue to increase in a rapid and unprecedented manner. As our community strives to become increasingly age friendly, we should recognize that (1) we are all aging, and (2) our policies influence environments that should be attuned to our future demographic reality, e.g., a Portland that will be markedly older, more diverse, and in need of environments that support social connections, service provision, and physical access. Portland must be a city that supports its citizens regardless of one's ability, income, race, gender, or age. Based on a review of existing literature and interviews with 13 key informants, this report provides recommendations related to the following areas:

Physical infrastructure:

1. **Neighborhoods:** Plan, design, and develop neighborhoods to enhance social supports and access to services, thus facilitating aging in community.

2. **Homes:** Require and/or incentivize the development of homes that support the physical and social needs of older adults.

Social infrastructure:

3. **Social supports:** Support and cultivate social structures – formal and informal – that enable older adults to age in their homes and communities.

4. **Equity:** Advance policies and practices that can reduce the impact of economic inequities on social connectedness and the ability to age in community.

The creation of homes and neighborhoods that support our current and future population will require collaborative efforts from state, regional, county, and city governments, as well as community members and stakeholders. The opportunity for advancing public good through policy and program delivery must be informed by an understanding of how physical and social environments impact the aging experience. The design of our neighborhoods and homes has the potential to foster positive social connectedness that can aid in the prevention of adverse physical, mental, and cognitive health outcomes and enhance the quality of life for older adults and those at any age. In summary, creating housing and neighborhoods that are age friendly and promote social connectivity is a sustainable solution to some of the challenges facing our aging population in Portland.

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Background

As Portland considers policy changes to single and multifamily zoning codes there is an opportunity for city planners to address social determinants of health and advance community well-being. It is important for city planners to understand both factors that influence social connections as well as the impact of social connectedness on public health. This report highlights key literature pertaining to home and neighborhood design, social connectedness, health, and aging, and augments that literature with primary data collected through interviews with key informants in the Portland region in spring and summer, 2018.

Policy Landscape

The City of Portland has embarked on two housing-related projects, the Residential Infill Project[1] and Better Housing by Design.[2] These projects are exploring policy updates related to single dwelling zones and multi dwelling zones in the City of Portland; both projects have considered policies that would lead to increased accessible housing in the form of "visitability."[i] Visitability is intended to increase the accessibility and resiliency of neighborhoods by: adding to the supply of housing with fewer barriers to people with mobility impairments; adding options for people to stay in their neighborhoods as they age and downsize; offering convenience to other users of all ages (e.g., parents using strollers, cyclists); and helping to remove barriers that can lead to social isolation for those with mobility limitations.[3,4] Visitability, albeit a lower accessibility standard when compared with universal design or other forms of accessible design, is beneficial to people of all ages and abilities.

Age-friendly Communities

The World Health Organization (WHO) defines an age-friendly community as one that has structures and services that are accessible and inclusive of older people with varying needs and capacities, emphasizes enablement rather than disablement, and is friendly for people of all ages and abilities.[5] Scholars studying age-friendly communities have suggested that social connectivity is a basic benefit of age-friendly communities[6] which is influenced by factors such as one's home, social network, and access to services.[7] The Action Plan for an Age-friendly Portland[8] – approved by Portland City Council in 2013 – and Portland's Comprehensive Plan[9] both address the needs for Portland to move toward becoming increasingly age friendly.

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[i] According to the City of Portland's Residential Infill Project (April, 2018: www.portlandoregon.gov/bps/article/678777), a *visitable dwelling* must have: "a zero-step entry, wider hallways and doors (34 inches minimum), a bathroom with adequate maneuvering area and an area to socialize (minimum 70-square-foot room) on the same floor as the bathroom and visitable entrance. This is intended as a relatively low-cost but high-impact way to increase accessibility. It does not accomplish or cost the same as providing for full accessible living, but it does provide a platform for future home modifications that can be tailored to meet the specific needs of the occupant."

Demographic Background

Portland, Oregon's population is growing, aging, and diversifying. In 2011, the first "baby boomer" (i.e., the birth cohort born from 1946-1964[10]) turned 65; since then Portland has continued to age in a rapid and unprecedented manner like the state of Oregon, the U.S., and the world.[11,12] By 2030, it is expected that 20% of Portland's population will be age 65 or older,[13] compared to 11.6% in 2018.[14] Additionally, the disability rate in the U.S. has been slowly rising since 2010 and Oregon is among the states with the highest rates of people with disabilities living in community settings (rather than institutional settings).[15]

In addition to population aging and rising disability rates, our population is also becoming more diverse. By 2060, 55% of the U.S. population aged 65 and older is expected to be non-Hispanic white compared to 78% in 2014.[16] Portland and Multnomah County are also experiencing a growth in the proportion of people of color and the overall diversification of its population.[17] With respect to housing diverse older adults in the U.S., older Asians (46%), Hispanics (43%), Blacks (33%), and other people of color (33%), were more likely than non-Hispanic whites (16%) to live in multigenerational households from 2011-15.[18] These data suggest that differences exist with respect to housing patterns of ethnic groups and it is important that we consider race, ethnicity, and culture when designing future homes and neighborhoods.

Caregiver Demand

There is currently a workforce shortage with respect to professional elder care services which is expected to become exacerbated as our demographics continue to shift.[19] In Oregon, the ratio of family caregivers is expected to drop from 6.9 potential caregivers for every person over 80 years of age in 2010, to 2.8 by 2050.[20] Although expectations exist that family, friends, and neighbors will support older adults as they age, data suggest that many forms of caregiving are being "outsourced" to nonfamily members.[21, 22] With limited funding for government safety net programs,[23] older adults' social networks will be important to meet their evolving caregiving needs. We must rethink support systems as the pool of available caregivers shrinks due to individuals having fewer or no children, relatives who live far away, and the general decrease in the availability of family caregivers.[24]

Social Determinants of Health

We know quality of life for older adults is influenced by their physical, mental, and cognitive health[25] and that those aged 50 and older typically experience higher levels of exposure to neighborhood conditions, have more physical and mental health vulnerabilities compared with younger adults, and are more likely to rely on community resources as a source of social support.[26] Furthermore, there is strong evidence that social relationships impact health outcomes. For example, lack of social connection carries a mortality risk comparable to smoking, obesity, inactivity, and air pollution.[27] There is sufficient evidence to support prioritizing public health interventions that build social connections alongside current priorities such as addressing obesity and

physical inactivity.[28] We also know that both physical and social structures within our society influence social connections.[29, 30] Physical structures, such as accessibility of homes, sidewalks, and transportation allow people to socialize together[31] and social structures – e.g., availability of social networks, patterns of economic inequity – impact our social connectivity and ability to age in community.[32]

Aging in Community
It is clear that most older adults prefer to age in their current home and community.[33,34] Historically, policy has focused on services to meet the needs of individual older adults; however, limitations of this approach are becoming clear (e.g., limited funding for services, workforce shortage).[35] The recent focus on aging in community highlights the need for supporting individuals with appropriate infrastructure while understanding the importance of relationships as an upstream approach to optimizing the aging experience.[36] Although aging in community can look very different due to the vast array of experiences of older adults,[37] there is a common need for physical, social, and service infrastructures that support healthy aging.[38,39] Age-friendly community initiatives should engage stakeholders and strive to advance environments in a manner that enables all community members, regardless of age or ability, to age in their home and/or in their current community.[40]

In order to facilitate aging in community and to promote the optimal aging experience, policies and programs should address physical barriers, as well as considering perceived barriers to individual behaviors that contribute to physical,[41] mental,[42] cognitive,[43] and social health.[44] Creating accessible physical environments and supporting social structures that minimize those perceived barriers will increase the likelihood of older adults initiating behaviors that we know support well-being. This will require a continuum of housing options that facilitate aging in community as well as neighborhoods designed to be supportive and accessible. Housing options to consider include smaller homes, accessory dwelling units (ADUs), cottage clusters, attached housing (e.g., townhomes, stacked flats), and apartments; additionally, it is important to facilitate intentional social structures that are imbedded in those designs such as multigenerational housing, age-restricted communities, and cohousing.[45]

The Impact of Policy on Environments, Social Connections, and Health
Figure 1 (see p. 6) provides a summary of how land use and housing policy affects physical and social environments, social connections, health, and quality of life. The figure is based on the review of literature and attempts to summarize relationships discussed in preceding background section.

Figure 1: Impact of Policy on Environments, Social Connections, and Health
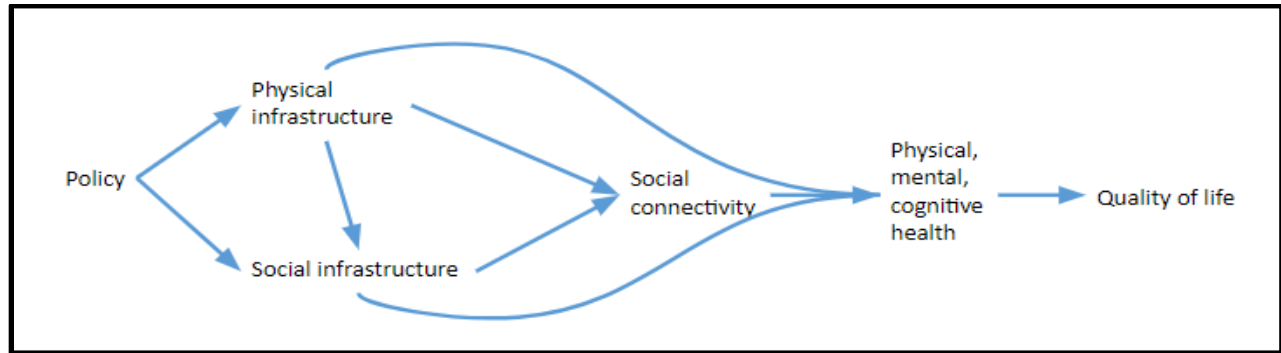
Methods

Between March and September 2018, literature was reviewed – i.e., community reports, peer-reviewed journals, popular press – that focused on age-friendly communities, environmental gerontology, home and neighborhood design, and other topics pertaining to social connectivity, public health, and equity.

From June to July 2018, 13 key informants were interviewed on the following topics: ongoing local policy processes, social connectivity of older adults, and home and neighborhood design (see Appendix A). Interviewees were selected based on their knowledge of older adult services or urban housing policy and design. At least three respondents were selected to represent the following groups: government agencies, direct service providers, community-based groups, and housing designers/developers.

Upon completion of the interviews, a content analysis of transcriptions were analyzed using pre-developed themes (e.g., policy, social connections); however, new themes also emerged (e.g., economic inequities) that were included in this report.

Limitations of the Research

The ability to make generalizations based on this qualitative study is constrained by several aspects of the research design. Limitations of this research include the small sample size, a lack of racial and ethnic diversity of individuals interviewed, and the research population being focused on key informants rather than older adults who have day-to-day experiences in housing and neighborhoods. It is important to note that several participants would fall into the category of community-residing older adult, but were selected for their knowledge and experience.

Future research could include more diverse voices, an older adult perspective, and a pre-post intervention study (e.g., making observations before and after policy changes have taken effect). In addition, it is important to note that the policy landscape was shifting through the duration of the research period and there was substantial variation of knowledge among key informants pertaining to the proposed policies under discussion.

Recommendations

The following recommendations are based on a review of existing literature and interviews with local key informants. These recommendations are intended to aid planners, policymakers, and community stakeholders in efforts to shape physical and social infrastructure; they provide policy direction by considering the evidence of how the design of environments affect social connections within the community, which ultimately influences health and quality of life.

Plan, design, and develop neighborhoods to enhance social supports and access to services, thus facilitating aging in community.

Historical development patterns focused on family-oriented housing and auto-centric community design which no longer serve our aging demographic in the same manner, especially those older adults who no longer drive and rely on walking or public transportation to access services such as grocery stores, pharmacies, medical appointments, entertainment, as well as opportunities for socialization.[46]

Physical design of environment is also important for mobility and socialization as neighborhoods with well-maintained street infrastructure and lower levels of noise and pollution enable residents to maintain social connectedness or cultivate new social networks.[47] It is also important to consider that even perceived environmental barriers to mobility are cited by older adults who experience loneliness.[48] Additional barriers to consider include difficulty navigating stairs, fear of tripping and falling over uneven sidewalks,[49] becoming tired from walking to a transit stop, or fear of losing bladder control when access to a restroom is limited during transit or at their destination.[50] A key informant described the mobility challenge:

> "Even if you could…take a bus with two transfers and then have to walk…it is too much work."

Housing in neighborhoods with access to amenities (e.g., grocery stores with healthy food, entertainment, and fitness centers) and services (e.g., home health nursing and therapy services, and home delivered meals) enable older adults to maintain physical health and increase social interaction[51,52,53] Past research has highlighted areas of Portland where higher proportions of older adults live with limited access to services such as grocers, parks, and frequent service transit.[54] Also, when older adults have access to transportation options, it can lead to more physical activity, access to appointments, shopping, and recreational opportunities, all of which will support social connection.[55] A key informant described challenges in accessing services:

> "If people can get what they need or get to the doctor, get their groceries, if there's ways those things are closer or transportation is available…it makes people more successful and they stay in their community. And those are the

7

things that start to slide people towards nursing homes and other facilities….
Getting the services to people [is] the most important thing.

More than 85% of older adults who receive services such as home delivered meals, transportation, and homemaker services in their homes are able to remain in place rather than moving to a setting such as an assisted living or nursing home[56] which can save tens of thousands in Medicaid dollars[57] and other housing-related expenses. However, funding for older adult programs is limited[58] and navigating those services is often challenging. Professional services are called upon when social supports cannot meet the needs of older adults.[59,60]

A trusting and reciprocal relationship with neighbors has been shown to provide a sense of security and to support older adults in sustaining their independence.[61] Creating options to live close to one's social network so they can receive more physical and emotional support decreases the burden on services and increases quality of life for older adults.[62] As a key informant noted, "If they don't have a family network or people who can help them, they will often call [a service provider] and say 'I don't even know where to begin'." The interviewee felt it was isolating "if you don't really know anybody who can help you with [navigating services]."

Planners and policymakers can work together to ensure housing for older adults is located in neighborhoods with accessible infrastructure, that housing for older adults provides good access to amenities and services, and by understanding that perceived barriers to mobility and service access can impact older adults' utilization of services. In addition to physical access, neighborhood design can facilitate access to social structures that support older adults in their utilization of services and can support aging in one's home and community.

Require and/or incentivize the development of homes that support the physical and social needs of older adults.

Housing with accessible design features promote independence, physical safety, and social connectivity; such housing can prolong independence and delay the need to move into a care setting.[63] Peter Pan housing[ii] is ubiquitous in our community as local building and zoning codes have not adequately addressed accessible residential housing. With 40% of people aged 65 and older having reported living with a disability,[64] our housing stock is not serving our current population and will fall woefully short of meeting the needs of our rapidly aging population.

[ii] According to Dr. John Pynoos (National Public Radio, September, 2011: www.npr.org/2011/09/29/140932807/pynoos-discusses-senior-housing), "Peter Pan" housing is "designed for people who are never going to age nor grow old." Such housing has stairs present, it often has inaccessible bathrooms and inadequate lighting, and it does not commonly have safety features that will help people avoid falls; some housing presents hazards to people.

One interviewee offered insight into the unit-selection process of a new housing development; they explained that older adults selected units with zero-step entrances and ground floor bedrooms, leaving other units for young families.

Visitable design has been shown to increase older adult independence[65] which improves their quality of life. This is important as the stairway injury rate for adults aged 75 and older was 13 times the rate for children and 37% of all falls result in hospitalization.[66] With respect to stair negotiation, a review of research findings recommended that older adults avoid stairs when possible to reduce potential for injury.[67] Zero-step entrances also facilitate easy ingress and egress for older adults which enhances mobility and enables them to access services and activities; group activities have been shown to be an effective intervention for social isolation.[68] A housing developer suggested the following with respect to accessible housing:

> "We open up a whole bunch of social connections [with accessible environments]. We are a society that values exchange and reciprocity. People wind up being devalued because we are not taking their gifts or accepting their gifts in terms of what they might share with us or their knowledge. It sets you up to be devalued because it is assumed you are not giving back because everyone is coming to you and it can be slight. It can be very subtle…When you are the person experiencing a disability…you want to go places but you can't always go in and share your gifts and sometimes it is really minor but it separates you out."

It is critical to understand that our current housing stock is inadequate for meeting the accessibility needs of the current population and this issue will be exacerbated over time as the proportion of older adults and people with disability increases. Planners and policymakers must find ways to require and/or incentivize accessible design; visitable design is a low bar for accessible housing – with universal design being a higher standard – but offers access to homes for visitors and is a marked improvement over the all-too-common Peter Pan housing that can be found throughout our community.

Support and cultivate social structures – formal and informal – that enable older adults to age in their homes and communities.

Housing can be intentionally designed to facilitate social structures in many forms such as intergenerational and age-restricted communities, cohousing, cottage clusters, shared housing, and other settings. Older adults with high levels of social capital have better physical and mental health outcomes,[69] increased social connectivity can reduce rates of suicide (especially among older men),[70] and those with strong social connections are less likely to be readmitted to the hospital.[71] One key informant detailed the danger of social isolation:

"Loneliness can be a killer…folks need someone to talk to."

Intergenerational communities have been shown to support intentional relationships and provide a sense of purpose, decrease loneliness, and increase social connection.[72] Residents of every age can share their strengths. For example, older adults can offer valuable experiential advice, lead a disaster preparedness effort, and provide caregiving for children. In exchange, older adults can benefit from relationships with children and young adults who provide cognitive stimulation, which can reduce the risk of dementia.[73] Younger people can also offer physical support such as bringing in groceries, provide meals during an illness, and provide caregiving when older adults are unable to meet their activities of daily living. One respondent described their perspective on housing that includes people of different ages:

> "In my mind the ideal [housing environment] is people of different ages because you have kids and families, and people who are retired, and single people and people who are coupled, and you have this plethora of skills and people can kinda trade with each other and support each other."

Age-restricted communities have significant benefits of scale and appeal to some older adults. Usually neighbors are retired and have more time to socialize than younger people who may be busy working or caring for children. Activities are formally and informally organized that enable older adults to socialize more easily.[74] Services that older adults benefit from can be provided more efficiently and effectively.[75] One responded described the experience of an older adult in a 55+ community:

> "She would walk down to the community center in her neighborhood…and what spawned from that was all the ladies in her neighborhood...would create a book club in one home and she did bridge and all these activities [with] a group of like-minded people wanting to keep each other social and active."

Another respondent described the difference between a housing development that encouraged social interaction and those that were more independently-oriented:

> "[In] congregate settings you will have people come do foot clinics and you can have 20 people come down for a service they didn't even know they needed, whereas, if I live alone in my home or in my one-off unit, someone is going to have to come to me or I'm going to have to go to the Hollywood Senior Center."

Programs that facilitate building relations with neighbors have successfully increased sense of social connection.[76] This was reflected in a statement from a respondent: "[If] the dwelling or neighborhood doesn't have any social functions built in, how are you going to get to know your community and the risk of social isolation goes way up...who is going to be looking in on you, checking in on you, making sure you are getting your mail?"

Villages NW is the Portland region's village[iii] that offers a "hub" (i.e., coordinating 501(c)3 nonprofit) and "spoke" (i.e., geographically-based local groups) model that brands itself as a network of "neighbors helping neighbors stay neighbors."[77] Villages support aging in place, provide access to social experiences, improve access to services, and aid in maintaining quality of life. Examples of services provided include changing a light bulb, transportation to a doctor appointment, and access to vetted professional vendors. One service provider described the village concept as:

> "[It] hooks you up with other people who are also not getting out enough and gives you one group you can go to ask for assistance or for social interaction and gives you events that happen on a regular basis. Definitely helps those people who don't have that network themselves."

Cohousing is a housing model that exists and is growing in the greater Portland region[iv] and has been shown to provide a higher level of social support than retirement communities.[78] Cohousing can either be age-restricted or multigenerational; a respondent commented that mixed-generation cohousing offers the potential for everyone to benefit from the variety of experience and strengths of residents living in the development:

> "What I love about the cohousing model is that you may have an older adult who needs help putting their support stockings on but can still hold a baby on their lap for two hours if you need to go run an errand. How do we blend that in a way that like we're helping create more livability because we are connecting people with the services they need through providing resources to people who are not able to get the resources on their own."

In Portland, an innovative intergenerational housing model called Bridge Meadows has emerged with the intention of supporting foster children, adoptive families, and older adults seeking affordable housing.[79] The community is intentionally designed to promote relationships and supports between the generations and there is an expectation for everyone to support each other. Bridge Meadows has recently expanded to open a second location in Beaverton and consults nationally on the planning and development of similar projects.

[iii] According to the Village to Village Network (2018: https://vtvnetwork.clubexpress.com/), "Villages are nonprofit, grassroots, membership organizations that are redefining aging by being a key resource to community members wishing to age in place. Villages are a social support network for their members that provide necessary services, (such as transportation, technology assistance, running errands to the pharmacy and grocery store), community engagement activities and other important resources crucial to aging interdependently. A Village reflects the community it serves and transforms the 'Silver Tsunami' of aging baby boomers into a 'silver reservoir' that grows and strengthens its community."

[iv] Cohousing.org lists more than 10 co-housing developments in Portland (2018: www.cohousing.org) and describes cohousing as an "intentional community of private homes clustered around shared space. Each attached or single family home has traditional amenities, including a private kitchen. Shared spaces typically feature a common house, which may include a large kitchen and dining area, laundry, and recreational spaces. Shared outdoor space may include parking, walkways, open space, and gardens. Neighbors also share resources like tools and lawnmowers."

A key informant offered an idea for housing older adults that shared similarities to the Bridge Meadows model:

> "[Since] it is becoming harder and harder to get caregivers [why don't we bring] single moms who need affordable housing together with older adults who need affordable housing…to connect [and] support each other in living and that is part of the contract going into this affordable housing."

ADUs and cottage clusters can also support intentional relationships and preserve a sense of privacy.[80] Living in close physical proximity can increase social participation.[81] A respondent agreed with the literature, stating: "I think aging-in-place in dense communities is much more reasonable and provides a higher quality of life." When older adults live in close proximity to a younger people or families, these arrangements can benefit all residents in ways such as enabling older adults to assist with child care or receiving support in the form of home maintenance, socialization, and a sense of purpose.[82] A 2010 Benton County health impact assessment identified benefits of ADUs as providing living spaces for those who were ill or living with a disability, placing older adults near caregivers, and offering intergenerational housing.[83] Along those lines, a respondent proposed a potential approach to housing:

> "If we could build a cottage in the back and have somebody live there while we live here, who could eventually be a part-time caregiver if we needed it, or we can move into the smaller unit and rent out this bigger house. I think that's another [option]. You can have your own unit and have help close by. That to me is a good model."

Promoting intergenerational communities can occur through land use policies that support a variety of unit sizes in a neighborhood, as well as housing that is accessible for people with disabilities. Planners and policymakers can work with service providers on creative options such as affordable housing that allows and/or promotes intergenerational communities. Land use policies should allow and encourage age-restricted communities, cohousing, cottage clusters, and ADUs which all provide increased density that may support social structures that allow aging in community.

Advance policies and practices that can reduce the impact of economic inequities on social connectedness and the ability to age in community.

Financial factors impact older adults' ability to nurture positive social networks[84] and to age in community.[85] While 7.5% of Oregonians aged 65 and older live at or below the poverty line in 2016, that number was even higher for certain subgroups of older adults, including 21% of Blacks, 12.7% of Asians, and 11.7% of Hispanics.[86] With housing prices continuing to rise in Portland,[87] older adults are struggling along with everyone else to find affordable housing. Renters are more likely to have low-income and are less likely to live in the same dwelling for a long period of time.[88] Affordable housing in Portland is often further away from the city center where services and

supports are concentrated, yet there isn't good transportation access resulting in low-income older adults facing barriers to behaviors that support healthy aging.[89] A respondent opined:

> "Why you put people who are older and living on a fixed income and have varying ability out away from [access and services] is beyond me....Out East is probably more affordable but it's not accessible at all."

Costs of displacement include loss of access to goods and services and loss of accessible neighborhood features.[90] Displacement has been shown to be associated with increases in emergency department visits and hospitalizations.[91] For older adults, displacement may be especially harmful when it results in loss of their support system or relationships with service providers they have grown to rely on and trust. A respondent described the experience an older person may have after moving:

> "They had to move there because of economics. They had to move to a new community. They don't know their neighbors and it is hard to rebuild that. Their worlds get really small. They go through trauma of the relocation with loss of friends, and your neighborhood grocery store and gas station, you just lose all of that. I think it is really difficult to recreate that and it just adds to the isolation and loneliness."

Interviewees with experience working with low-income older adults in Portland noted limited housing choices, lack of satisfaction, limited social capital, and reliance on the safety net system which is complex and often requires assistance to navigate. They noted that older adults may live in neighborhoods that lack sidewalks and access to transportation, are far from services, and feelings of being unsafe. A service provider described the experience of living in low-income senior housing:

> "Affordable housing seems to exacerbate those kinds of situations where there are more mental issues or other issues that people bring that cause problems... If a person has means and can move easily from one place to another, if you lived in an apartment and you didn't like the people who you were living near, you could decide to move if you are flexible and able. If you are not flexible and not able and don't have the means to do that, it is really hard. Plus, with the waiting list...you can't really go from one subsidized housing to another, you have to wait two to five years or longer, so you are kind of stuck which may exacerbate the problem."

In contrast, a housing developer described a very different experience for older adults who have the means to plan for their future and select a community that will provide access and supports:

"Everybody has plans. They have taken a step to take charge of their aging. They aren't expecting someone else to do it. What do you think you can do for the community? What skills do you bring? Being proactive in playing a role in the community and not waiting for somebody to take care of you."

Those working with older adults who are financially comfortable expressed that those individuals often have good social capital and are proactive about investing in a community that will support them as they age. They also often live in neighborhoods with good sidewalks, good access to transportation, and are able to walk to amenities without fear of safety. Fortunately, supportive physical and social infrastructures have been shown to compensate for lack of resources for low-income older adults;[92] however, access for those communities remains a challenge.

Policymakers and leaders should encourage affordable housing near services, strive to prevent gentrification and mitigate the consequences of displacement, arrange property taxes so that older adults can remain in their homes one limited fixed incomes, increase the stock of affordable housing to allow low-income older adults the ability to live in a neighborhood the promotes positive social connections, and create physical and social infrastructures that compensate for lack of resources and decrease disparities.

Conclusion

Our community will continue to grow, diversify, and age. Leaders and policymakers must be proactive in addressing these trends. Key informants interviewed as part of this project shared the opinion that it is going to take a collaborative efforts from state and local governments, neighborhood associations, and grassroots organizations to create ideal environments that support these changes. Policy suggestions offered include offering flexibility in land use that offers more ways to "create smaller units that are economically feasible within a neighborhood" as well as adjusting policies to ensure that Portland is not "perpetuating inequity by creating policy that supports wealthy white able-bodied community members versus other community members."

One respondent felt that what was needed was a campaign on aging in community:

"[We need] a pro-aging campaign or get-to-know-your-neighbor campaign where we could start to value older adults and have an interest in them. I think that would change how people approach older adults."

The Residential Infill Project and Better Housing by Design project are opportunities for the City of Portland to advance the 2013 Action Plan for an Age-friendly Portland and Portland's Comprehensive Plan. Portland must figure out how to advance accessible housing and neighborhoods that enhance and support social connections within communities.

In summary, investing in the design of our neighborhoods and residential homes has potential to foster positive social connectedness that can prevent adverse physical, mental, and cognitive health outcomes and enhance the quality of life for older adults and those at any age. Creating housing that promotes social connectivity is a sustainable solution to some of the challenges facing our aging population in Portland.

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