Colorado Lifelong Homes

A Review of Barriers & Solutions for Aging in Place

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Abstract

Colorado's aging population is growing, yet our housing options are not evolving to support this population. The need for housing that accommodates older adults as they age is crucial to balancing demands on other services, such as assisted living facilities, and to support successful and healthy aging. Most homes in our state are not built using principles of universal design that support successful aging in place. The outcomes of community and industry engagement activities show that advocating for lifelong housing is a critical step to help advance age-friendly housing in the state of Colorado. This paper summarizes key research and industry trends related to lifelong homes, the barriers in the marketplace, and the key qualities of lifelong homes. Based on this research, we present a path forward for advancing affordable, healthy, and safe home options for our growing population of older adults in Colorado and beyond.

About IBE

The mission of the Institute for the Built Environment (IBE) is to advance the development of healthy, thriving built environments. We are based at Colorado State University and form interdisciplinary teams of on-campus faculty and students and off-campus professionals to take research to practice.

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PREFACE

Aging in place is "the ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income or ability level"[1]. Indeed, according to an AARP survey, 90 percent of people age 65 and over would prefer to stay in their own homes as they get older, and 80 percent believe their current residence is where they will always live[2]. For older adults to age in place, their physical environment must be accommodating, health promoting, and affordable. The Institute for the Built Environment's *Colorado Lifelong Homes Certification Program* provides a critical path toward supporting older adults as they age.

As Interim Director of the Columbine Health Systems Center for Healthy Aging at CSU, I am so pleased to support this work. This recently-launched Center for Healthy Aging serves as a catalyst for interdisciplinary research and evidence-based outreach and education about healthy aging. The center engages faculty and students from across campus and is connected to Colorado municipal and state government, industry, and regional aging centers at other Colorado universities, as well as multiple stakeholders in the nonprofit sector. The work of the center involves three key intersecting areas, with a key vision toward supporting the desire of individuals to age in place:

- Mechanisms (biological, social, psychological, community) that support healthy and successful aging;
- Neurodegenerative disease, dementia, and connections between underlying pathophysiological mechanisms and associated behavioral factors;
- Environments and technology that support aging by promoting healthy aging and mitigating challenges of aging.

I invite you to read this innovative white paper. The authors present a thoughtful analysis and exciting plan for supporting our aging population through affordable, healthy, and safe housing options. This program is vital to supporting the growth of the aging population in Colorado, and will serve as a model for communities and states addressing similar needs.

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An Introduction to Aging & Housing

Directly after World War II, between the years 1946 and 1964, more than 72 million babies were born in the United States. This generation would come to be known as the Baby Boomer Generation. Starting January 1, 2011 individuals in this generation began turning 65. According to the Population Reference Bureau, the number of individuals age 65 and older will nearly double from 46 million to 98 million by 2060. By 2024, all of the individuals in this generation will be over the age of 60 and considered a part of our senior population. This will be the first time in the history of the United States that seniors will make up such a large sector of our population. Due to this shift, many changes will need to be made across various industries to accommodate this population.

The CDC defines aging in place as "the ability to live in one's own home and community safely, independently, and comfortably regardless of age, income, or ability level."[1] Giving a senior the ability to remain in their home and community greatly impacts an individual's well-being.[3] The AARP[2] reported 90% of adults would prefer to remain in their homes and communities as long as possible.

This and other research has shown that when older adults can remain independent in their homes, they are happier and more likely to stay active and healthy well into their later years. With a safe and supportive home environment, aging populations may not need as many expensive and supportive services, balancing demands on other housing alternatives like assisted living facilities. However, most homes are not built using age-friendly or universal design principles to support seniors staying in their homes as they age. These design principles are not widely known or understood, therefore most Colorado homes are not designed in a way that supports older adults.

Having an aging population raises many questions, especially when it comes to the built environment. Creating communities with homes and open spaces that support the changing physical abilities and lifestyle preferences of aging individuals is crucial for the health and well-being of this population and our communities at large.

Place Attachment

The term "place" has several dimensions that are interrelated: a physical dimension that can be seen and touched like a home or neighborhood, a social dimension involving relationships with people, and the ways in which individuals remain connected to others.[4]

Growing older and maintaining a sense of place through "aging in place" can be defined as "remaining living in a community with some level of independence, rather than in residential care".[5] Quality of life is greatly impacted by where a person lives; this is especially true as a person ages.[3] There are many factors that may cause an older person to spend more time in their home and in proximity to it, including: retirement, limited mobility, and limited access to transportation. An older person's living environment does not only include their home but also where they shop, their places of worship, and other places where they feel a sense of community.

Having an attachment to a place can be described as having certain feelings about a specific geographic location that emotionally binds a person to that community.[6] "Attachment to place is not a state, but a process that continues throughout life" (143).[6]

Since attachment to place is a process that occurs across the lifespan, older adults are specifically likely to have a strong attachment to the communities in which they live. Research conducted on the benefits of aging in place often highlights the importance of maintaining autonomy later in life and how remaining in a home and community can impact this autonomy.[3]

Giving an individual the ability to stay in their home and community as they age is a simple concept that is unfortunately not as simple to execute. Clarity found an individual's biggest fear as they age is losing their independence, and a large contribution to this fear was losing their home.[7] Not giving an older person the ability to age in place can often result in a loss of independence which can result in depression, stress, functional deterioration, and general loss of well-being.[8] A home can be made to be more functional and have less potential harms for an older adult.[4] This is done by including elements like stepless entries, wide doorways, easy-grip hardware, user-controlled lighting options, and access to appliances from a seated position. Unfortunately, many homes in our community are not initially equipped with these functions and can often only be modified through extensive retrofits which may not be feasible for most seniors.

Universal Design

"Universal Design is not a new science, a style, or unique in any way. It requires only an awareness of need and market and a commonsense approach to making everything we design and produce usable by everyone to the greatest extent possible." -Ron Mace, Founder, Center for Universal Design

Beginning in the 1950's, builders began strategizing ways to design spaces for people with disabilities. Now referred to as universal design, strategies were developed to eliminate obstacles in the built environment and make it easier for individuals with physical disabilities to navigate spaces.[9] By the 1970's, builders began to move beyond barrier-free design, which tailored certain parts of a home to accommodate to those with disabilities, and instead began to normalize design accessible for all. In 1973, Section 504 of the Rehabilitation Act, the first federal mandate revolving around accessible design, was created. This policy only required buildings that receive federal funding to have accessible design. It was not until the passage of the Americans with Disabilities Act (ADA) in 1990 that principles of accessible design were required in buildings considered both public and private. This act required that all buildings considered "public entities"--including those of any state or local government and any of its departments, agencies, or other instrumentalities--be designed using these principles.[10]

The ADA does not apply to private housing; however, the Fair Housing Act of 1988 requires that all newly constructed multi-family dwellings have certain accessible features. Some of these features include at least one accessible entrance, wider than average doorways, and usable kitchens and bathrooms. As builders began to implement standards required by these new laws, it became apparent that many design features made homes feel institutional-like and sterile looking. Builders also became aware that many of the features used to accommodate people with disabilities actually benefited all people. Recognition of this helped change the market and made many of these features more common, less expensive, and more attractive. Members of our aging community, especially the Baby Boomer Generation, are taking advantage of these features due to their usefulness in assisting them as they age. Providing older adults with these features ultimately assists them in completing their activities of daily living and benefits overall well being.

Aging In Colorado

The Population Reference Bureau projects that by the year 2060, numbers of individuals in the United States over age 65 will reach a record high of 98 million individuals. Colorado is currently the third fastest aging state in the nation at over 29%. Colorado continues to be a desirable location for retirees, and working toward adequately meeting the demand is a State priority. By 2020, it is expected one in five residents in Larimer County will be 65 years or older (Coloradan, 2014). The 75-84 and 85+ age groups have the highest projected average annual growth rates at 3.5% and 4% respectively between 2018-2050 (Fort Collins Trends and Forces Report draft, 2018).

Having an aging population raises many questions, especially when it comes to the built environment and an individual's ability to successfully age in place. As mentioned in the previous section, a wide array of research has shown that aging in place is crucial to an individual's success in later life.

Many communities in Colorado are becoming aware of the need to implement strategies that enable seniors to stay in their homes and communities. By 2030, the state of Colorado will have more than 1.2 million residents that are over the age of 65. This past January, Colorado Governor John Hickenlooper announced the creation of a new position to address aging-related concerns for the state, including housing. The Governor's Strategic Action Planning Group on Aging also released a report in 2016 containing key findings and recommendations for the state of Colorado. Various municipalities throughout the state have begun taking steps to address this huge demographic shift. For example, in Colorado Springs, it is projected that numbers of residents over the age of 85 will grow by 330% in the next 20 years (Fox21 News, 2016). In an attempt to address the changing needs of its aging population, Colorado Springs became an AARP recognized Age-Friendly City and has started a program to designate businesses and services around the city as age-friendly. In 2010, organizations across Larimer County began to focus on ways to strategize for the possible challenges that may come with the anticipated growth of the senior population. From this, the Partnership for Age-Friendly Communities (PAFC) was established to create a coordinated plan of action to prepare Larimer County for this demographic shift. PAFC has a mission of fostering leadership and strong community collaborations that will plan, design, and implement sustainable strategies to enhance quality of life for older adults in Larimer County. In 2017, PAFC published its 'Livable Larimer County' report, summarizing the need for age-friendly housing in Larimer County and an action plan for program development and policy development. One goal stated in this report was to increase age-friendly design in new and existing housing. The activities of all of these groups point to a crucial need for a change in the Colorado housing market to help accommodate the needs of the aging population. They also include many recommendations to help seniors age in place and remain active in their communities, including support for efforts to create a certification program to encourage the inclusion of universal design elements in new and remodeled housing for seniors.

In 2016, PAFC partnered with the Institute for the Built Environment (IBE) to help us identify how we could make an impact on age-friendly housing in Larimer county. This question is of great importance and alignment with IBE's mission to advance the development of healthy, thriving built environments. As a soft-funded outreach center at Colorado State University, IBE is a unique bridge between the university and Colorado communities. Therefore, IBE has entered into a long-term partnership with PAFC to collaboratively advance lifelong housing in Colorado to increase affordable, healthy, and safe home options for our growing senior population. Advancing age-friendly housing in Colorado is a strategic initiative of IBE and deeply aligned with our mission.

As awareness and demand for age-friendly housing rapidly increases, it is now essential that we create a tool that will help the market quickly advance to meet this need. To prepare for this project, At IBE we have already invested considerable time in a few key activities. In 2016 and 2017, our team conducted a series of community and industry engagement activities that included a visioning charrette; one-on-one interviews with stakeholders; a workshop at Colorado's Housing NOW Conference to understand affordable senior housing considerations; and a certificate program planning workshop, through which the certificate outline and key components were defined. A key outcome of the initial visioning charrette was the conclusion that a certification program would support the development of more and better options for aging-in-place. As a follow-up, we conducted market research to identify other age-friendly housing certification systems in the U.S. and internationally. Finally, in partnership with PAFC, we established an initial advisory committee with representatives from Larimer County, including members of the National Association of Home Builders (NAHB), the Colorado Department of Local Affairs (DOLA), Housing Catalyst, Loveland Housing Authority, and private home developers.

MIRASOL SENIOR COMMUNITY

Contained Retirement Community, Loveland, CO

In 2010, the Loveland Housing Authority began strategizing ways to meet the needs of its growing senior population; from this, the Mirasol Community was developed, opening in 2013. This community was built over the course of three years and has various rental options including duplexes, apartments, and a skilled nursing facility. These options enable residents to move to different types of housing within Mirasol as their needs change, and yet also allows them to continue living an active life and being a part of the larger Loveland community.

Mirasol is located in an area that has easy access to medical services, grocery stores, and safe outdoor spaces. All of the homes are designed to facilitate safe and independent living for seniors of all abilities. Floor plans are designed with universal principles to help seniors feel safe and comfortable in their homes as they age. The community has been very successful, and Loveland Housing Authority is currently in the process of fundraising for the expansion of Mirasol.

MARKET BARRIERS TO LIFELONG HOMES

Age-friendly and accessible homes are not common in the market, therefore, there are likely industry conditions that create barriers for the development of these homes. To identify the best solution for advocating for more age-friendly homes, we need to better understand these market barriers.

To understand the market barriers to lifelong homes, our team reviewed industry research, conducted a series of engagement work sessions with community members and industry professionals, and reviewed real estate market conditions in Colorado. Through the analysis of this data, we identified four primary barriers to creating age-friendly homes and communities in Colorado, though all are applicable beyond the state.

Barrier #1

Home developers are not incentivized to build homes that support aging in place.

Home builders and developers are very aware of the cost of designing and constructing homes, and they align their homes with what consumers are asking for and willing to pay for. Housing features go in and out of popularity with consumers, and these trends incentivize the market and prompt response from builders and developers. Many features of age-friendly homes are not common at present, and therefore not a trend. Some features can also be perceived as adding expense (e.g., stepless entries), but the true cost of these features is often minimal and is dependent upon local conditions.

To support home builders, more detailed cost data for age-friendly home design features is needed. Age-friendly design features should also be clearly defined and prioritized, identifying which are required and which features can be optional add-ons. This delineated cost data will help home builders and home buyers better understand their options.

Finally, home builders need a way to market age-friendly homes to buyers. A recognizable seal of approval provided by a certification would be an excellent tool for builders to clearly market their homes to older adults.

Barrier #2

Home buyers of all life stages do not understand the need for age-friendly homes or their options.

Home buyers often do not consider how their lives might change over time and how their homes could end up not supporting their needs. Accessibility is not typically something we are mindful of until we need it. To support home buyers in considering home accessibility, they need educational resources that illustrate the qualities of age-friendly homes. Real estate MLS (Multiple Listing Service) does not contain consistent coding for home features, which makes it difficult for home buyers and realtors to adequately search for aligned homes. Consistency in terminology and in standardization of how home features are evaluated and listed is needed, as well as training for real estate professionals to support them in evaluating and communicating these features to home buyers.

Barrier #3

Most existing homes are not designed to accommodate older adults.

Most existing homes were not built using principles of universal design and therefore do not support aging in place. There are stereotypes that universal design is institutional and cold--which have disincentivized designers, builders, and homeowners to build and purchase homes that follow these standards. Unfortunately, many older communities were also built before there were municipal policies requiring neighborhood amenities such as accessible sidewalks. Additional features of older communities include entryways with multiple steps, narrow hallways, and small, inaccessible bathrooms. Therefore, retrofit guidance should be developed to show how to alter older homes to support aging in place. In addition, examples of how to do these retrofits in a way that is beautiful, not institutional, would support the removal of this barrier.

Barrier #4

Municipalities struggle to incentivize lifelong home development.

Many Colorado communities are becoming aware of the need for lifelong housing and are looking for strategies to incentivize the market. However, local governments do not have clear standards for what to include in formal codes and incentives that would support the development of lifelong homes. Some cities have attempted to pass "visitability" ordinances, while others support contained retirement communities. As stated previously, it is important for age-friendly homes to be integrated into the fabric of communities. Therefore, municipalities should be engaged in order to develop incentives or the construction of lifelong homes and the renovation of existing homes.

"Unfortunately, it is difficult for real estate professionals to determine which available homes would be accessible for their clients or to understand exactly what level of accessibility a home possesses. Ideally there would be standardized language around accessible features of a home and proper education within the real estate community to understand how to classify a listing so that they can be found, and clients' needs served."

- Danya Rivlin, Licensed Broker at STEPS Real Estate

Home Certification as a Market Incentive

Home builders and developers often respond to market conditions when creating new projects and housing developments. They choose features to include in homes based on what buyers are requesting and what is a trend. They are also aware of the cost of homes and what consumers are able or willing to pay for. They also must comply with required standards and sometimes opt to include additional standards voluntarily for various reasons. A popular and effective strategy to influence market conditions is to incentivize the market.

Stimulating the market through structural, financial, and technical incentives could change the standard in which homes are built, encouraging builders and developers to start building lifelong homes. Since homes are not typically built using principles of universal design, using incentives like updating municipal codes or expediting permit processes for those who do so could advance market conditions. Building homes in this way supports usability by people of all ages and, in turn, supports the ability to age in place.

A design certification program would reward lifelong homes by giving them a seal of approval that can be used by builders and realtors to market homes. A certification provides a set of building standards that advances industry by educating design, construction, and real estate professionals. It encourages housing design that enables adults to live at home longer, ostensibly reducing their personal expenses and the risk they will become dependent on government services. Finally, a home certification can empower and educate adults on how they can have a healthy, thriving future at home.

Other Certification programs (for example, LEED and Energy Star) have proven to be successful tools for market transformation. They bring awareness to an issue, educate consumers about their options, and provide a tool for businesses to differentiate their products. They also provide greater clarity to the marketplace by defining requirements, and they elicit trust through third party verification.

Existing Examples of Home Certification Programs for Aging in Place

There are a few examples of lifelong / age-friendly home certification programs in the United States and around the world. These programs are currently at varying degrees of development and success.

U.S.-based programs include:

- Better Living Design, National
- Livable Design, National
- Lifelong Housing Certification, Rogue Valley, Oregon
- Easy Living Homes, Virginia

International programs include:

- Universal Design Mark, Singapore
- Lifemark, New Zealand
- Living at Every Age, Switzerland
- Saferhome Standards, Vancouver, BC

LIFELONG HOUSING CERTIFICATION

Rogue Valley Council of Governments, Oregon

PROBLEM

The population of individuals ages 65 and older in the state of Oregon is expected to increase 105% by the year 2050. Southern Oregon currently does not have enough homes to accommodate the needs of its rapidly growing aging population. When the Rogue Valley Council of Governments realized its aging population did not have many housing options to accommodate them they decided to establish the Lifelong Housing Certification Project.

PROCESS

The Rogue Valley Council of City Governments created a voluntary certification process for evaluating the accessibility and/or adaptability of homes. In partnership with AARP Oregon, this project was designed to help meet the growing market demand for accessible housing in Southern Oregon (Lifelong Housing, 2018). To develop this certification program, a small committee of industry professionals and consumers was formed with the goal of raising the community's awareness about the value of accessible homes. The committee also developed and implemented a public education and promotion plan for the program, the first of its kind in the state.

SOLUTION

The Rogue Valley community currently has five completed homes that meet all levels of its Lifelong Housing Certification Project. It is in the process of building 19 more homes in the community that also meet these standards. The general response to the creation of this program from consumers and industry has been very positive, and it has gained national attention.

QUALITIES OF LIFELONG HOMES

Based on our research, our work hosting charrettes with industry leaders and older adults, and our facilitation of workshops with community members, our team has identified five key focus areas that should be included in a certification framework for age-friendly housing.

Walkability & Community, Visitability, Universal Design, Safety & Fall Prevention, and Affordability & Maintenance. The design needs for lifelong housing are straightforward, and we have identified some primary exemplar design strategies within each of these five major themes. Building homes and communities with these five areas in mind will help support Colorado residents throughout their lifetime.

	FOCUS AREAS	DESIGN STRATEGIES
	**WALKABILITY & COMMUNITY** The design of surrounding neighborhood and availability of amenities	• Access to Natural Spaces • Accessible Sidewalks • Public Transportation • Socializing & Services
	**VISITABILITY** The accessible design of residential common spaces and entrances	• Stepless Entry • Generous Hall & Door Width • Accessible Guest Restroom • Parking Accessibility
	**UNIVERSAL DESIGN** Livable and adaptable interior spaces	• Inclusive • Welcoming • Adaptable • Flexible
	**SAFETY & FALL PREVENTION** Thoughtful application of interior finishes and furnishings customized to the homeowner	• Slip-Resistant Flooring • Accessible Bathroom • Adequate Interior Lighting • Clutter-Free
	**AFFORDABILITY & MAINTENANCE** Consideration of first cost and ongoing operating costs	• Energy Efficiency • Mortgage & Rent • Low-Maintenance Landscaping • Accessory Dwelling Units

Walkability & Community

The design of surrounding neighborhood and availability of amenities

Access to Natural Space

Accessible Sidewalks

Public Transportation

Services & Socializing

In 2007, the World Health Organization (WHO) announced its Age-Friendly City initiative. For this initiative, they laid out essential functions of age-friendly cities, many revolving around giving older adults the opportunity to remain active and easily navigate their communities. We have identified Walkability and Community as an essential component of a certification program because homes that include access to services, socializing, open space, and transportation encourage active living and community involvement.

Having parks and open spaces in our communities that can accommodate the needs of our aging population is crucial. Ensuring that communities have safe, accessible, and walkable paths in neighborhoods and parks is crucial to supporting aging in place, as is access to public transportation. Giving older adults the opportunity to utilize open space and the services in their community by making them safe and accessible can also help increase sociability and promote physical and mental health, which in turn, supports wellbeing in later life (Loukaitou-Sideris, A., Levy-Storms, L., & Brozen, M., 2014).

Resources

- Urban Street Design Guide, National Association of City Transportation Officials
- Livability Fact Sheets, AARP
- The Secret to Living Longer May be Your Social Life, TED2017

Walkability & Community:
Parks Without Borders

Age-Friendliness in New York City's Department of Parks & Recreation

PROBLEM

Older adults are at an increased risk for deteriorating mental health, sedentary lifestyles, and social isolation. According to the Administration on Community Living, about 30% of individuals over the age of 65 live alone.

PROCESS

In 2016, New York City officials launched Age-Friendly NYC and began to take steps to improve the lives of their senior population. City officials created a list of initiatives to facilitate health in later life, and one of these initiatives was to improve access to parks. They found that maintaining community involvement is important to wellbeing, and thought parks could facilitate activities for older adults, and provide a setting for interaction, exercise, and commune with nature. Although parks provide an opportunity to enhance the health and wellbeing of seniors, New York City officials noticed that many communities did not have parks designed with seniors in mind.

SOLUTION

The New York City Department of Parks & Recreation first conducted a survey to gain insight on how to make parks throughout the city more usable for seniors. With this information, they then created the Parks Without Borders initiative. This initiative made many physical and policy changes to create more welcoming entrances, make park boundaries greener, and improve safety and accessibility. They also started to offer a variety of activities for seniors at parks throughout the city, such as the Environmental Stewardship Program, to give older adults the opportunity to remain active while caring for plants in the parks.

Visitability

Accessible design of common spaces and entrances

Step-Free Entry

Generous Hall and Door Width

Accessible Guest Restroom

Parking Accessibility

For older adults, moving out of a home can be a huge disruption and can cause significant harm to their wellbeing and quality of life. Building homes with interior design features that support individuals of all abilities is not only important for our aging population but can benefit individuals with disabilities, those who have recently sustained an injury, and parents of young children. Not only are these homes accessible and accommodating to those who live in the home, but also for anyone who visits.

Recently, cities have started to realize the importance of building homes that are accessible and have design features that cater to people of all capabilities. In 2009, Lafayette, Colorado adopted a Visitability Ordinance to prepare for what they referred to as the "Silver Tsunami." This ordinance requires that 25% of new homes being built in Lafayette include at least one stepless entry, wider than normal doorways in certain rooms, and other elements to make it easier for individuals of all abilities to access the home. Many municipalities around the United States have adopted policies like this to ensure homes are designed with a diversity of individuals in mind.

The key design features, listed below, have been recognized by organizations including the AARP, the World Health Organization, and the National Aging in Place Council as important to promoting successful aging in place.

Resources

- Residential Rehabilitation, Remodeling and Universal Design, Center for Universal Design
- Bathroom Checklist, AARP
- Visitability Resources, Concrete Change

Visibility: Water's Edge

Age-Restricted Subdivision, Fort Collins, Colorado

PROBLEM

The City of Fort Collins has an active Senior Advisory Board (SAB) with the mission of serving as advisory for City Council on programs and policy that help aging citizens live full and interesting lives (Fort Collins Senior Advisory Board, 2017). According to its 2017 Annual Report, the needs they focus on addressing are accessible and affordable communities designed specifically for seniors. These same issues were also identified in the 2017 Larimer County Partnership for Age-Friendly Communities' Five Year Plan and the 2016 Governor's Strategic Action Planning Group on Aging's report.

PROCESS

Water's Edge is a new community being built in Fort Collins, Colorado. This community is designed for seniors using many practices that the AARP defines as a healthy and livable. This includes a safe, secure, walkable environment; housing options; opportunities for recreation and culture; and nearby, high-quality health facilities. As Larimer County's population of individuals over the age of 65 is the fastest-growing in the state, developers identified this as the ideal place to introduce this type of community (Colorado State Demography Office, 2016).

SOLUTION

After responding to the need for expanding senior housing, in March of 2017, the City of Fort Collins approved plans for the development of the Water's Edge Community. The 800 homes in this community will all be built using principles of universal design. Each home will offer single-story, accessible living with features including wider than average doorways, open floor plans, and accessible kitchens and bathrooms.

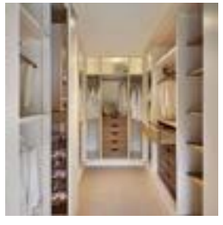
Universal Design

Livable and adaptable interior spaces

Age Inclusive

Welcoming

Adaptable



Flexible

Designing with adaptability in mind can ensure that a home will support the needs of both current and future residents. Universal Design (UD) prioritizes adaptability in homes, creating inclusive spaces that are functional and convenient for all ages. UD principles do not compromise aesthetics or size of a home and can be considered high-performance features that improve the function of a home as the needs of its inhabitants change and evolve.

A welcoming step-free entry, covered porch, adequate lighting on path, and visible house numbers, for example, provide useful amenities to those with physical or visual disabilities, but also to a parent pushing a stroller. While a main level bedroom and full bath are important for UD, vertical flow can be addressed by stacking closets in design so that any potential need for a future lift or elevator in the home is easily accommodated. Stairways with railings on both sides, lighting and non-slip surfaces on step increase safety for both residents and visitors. Simple blocking installed during construction behind bathroom walls surrounding the shower, bathtub, and toilet provides the opportunity for grab bars to be easily added, should they become necessary. Wider doors and hallways on the main level, sinks with an offset drain, moving pipes toward the back of the sink and extending flooring beneath cabinets during construction allow spaces to be easily modified for a wheelchair user if needed. These features ensure flexibility and adaptability for future uses of bathrooms and kitchens by extending the flooring under cabinets and kitchen islands, and include varied-height counters to accommodate a range of users.

Resources

- The Accessible Home: Designing for All Ages and Abilities, Deborah Pierce
- Inclusive Housing: A Pattern Book, Center for Inclusive Design and Environmental Access

Universal Design:
Living Laboratory

Universal Design & Green Building Demonstration Home, Columbus, Ohio

PROBLEM

Understanding the benefits of universal design can be difficult without the opportunity to experience the thoughtful design features firsthand. The Universal Design Living Laboratory (UDLL) addresses this issue by providing a tangible example for visitors to experience.

PROCESS

After a biking accident paralyzed Rosemarie Rossetti, she and her husband designed and built their new home as a showcase for residential universal design. In addition to hosting tours and workshops, this home serves as a catalyst for change in the design industry by providing much-needed education to consumers and industry professionals.

SOLUTION

Providing education and experiential examples of universal design features helps to incentivise builders and increase consumer demand for residential universal design. Many universal design demonstration homes have been built in the U.S. over the past 30 years, and most are now private residences. In addition to UDLL, some additional demonstration homes currently accepting visitors include:
- Welcome HOME Bed and Breakfast, Newburg, WI
- Frank Lloyd Wright's accessible Laurent House, Rockford, IL
- Mast House, tours and nightly rentals, Scottsdale, AZ

Images used with permission and provided by UDLL founder Rosemarie Rossetti, PhD

Safety & Fall Prevention

Thoughtful application of interior finishes and furnishings

Slip Resistant Flooring

Interior Lighting

Accessible Bathroom

Clear of Clutter

Traditional home designs can often become unsafe for older adults and can contribute to increased falls, which greatly impact the health and vitality of seniors. According to the Centers for Disease Control and Prevention (2016), the fifth leading cause of death among older adults is unintentional injury or accidents, many of which happen in the individuals' homes.

The way a home is designed plays a crucial role in preventing falls and keeping seniors safe. Building considerations that can provide a safer home environment include slip-resistant flooring, wide hallways and doors, ample interior and task lighting, and storage spaces incorporated throughout the home to help keep pathways clear of clutter. As people age, we require three times more lighting to complete the same task; adequate interior lighting is a key component of designing home interiors.

New homes should be built using principles of universal design to prevent falls and promote health. Until this style of building is normalized, organizations and programs have been created to fill in the gaps by making improvements to existing homes. Researchers at Johns Hopkins University developed the hugely successful, cross-disciplinary, and evidenced-based CAPABLE Program, featured in the case study on page 22.

Resources

- HomeFit Guide, AARP
- Aging in Place Remodeling Checklist, NAHB
- Home Safety Checklist, National Institute on Aging

Safety & Fall Prevention:
CAPABLE Program

Community Aging in Place - Advancing Better Living for Elders (CAPABLE)

PROBLEM

People are aging in homes that do not support their changing physical needs, and would prefer to stay in their familiar residences and neighborhood. Barriers to safety at home include lack of funding for home modifications and lack of knowledge for what changes would be necessary for an individual's unique physical, social, and cognitive needs.

PROCESS

Researchers at Johns Hopkins University have created an evidenced-based approach to address this immediate challenge, with an emphasis on preventing falls, reducing risk of hospitalization, and enabling independence. Using a cross-disciplinary approach, the CAPABLE Program has been shown to save Medicare, on average, $10,000 per year (Ruiz, et al, 2017).

SOLUTION

A multidisciplinary team include the older adult, an occupational therapist, a registered nurse, and a handyman are at the core of the CAPABLE Program. All services are grant-funded and provided in the existing homes of older adults in the community. Outcomes include decreased fall risk, decreased pain, decreased depression, improved safe mobility, and improved ability to safely accomplish daily functional tasks (Ruiz, et al, 2017). Colorado's Visiting Nurse Association (VNA) was an early adopter of CAPABLE. To date, the VNA has served 60 clients in the Denver area and has partnered with Habitat for Humanity of Metro Denver to expand the program even further.

Affordability & Maintenance

Consideration of first cost and ongoing operating costs

Energy Efficiency

Low-Maintenance Landscaping

Rent/ Mortgage Cost

Accessory Dwelling Units

As people age, their income declines significantly. Recent rates of inequality and income insecurity for seniors in the U.S. have been on the rise, impacting seniors' ability to afford monthly housing expenses. Seniors who feel stable in their homes and confident in their ability to pay expenses often demonstrate better physical and mental health, while those who feel insecure are at a heightened risk of stress that can affect both physical and psychological health (Bekhet et. al, 2009). Home affordability and the costs associated with maintaining and operating the house are crucial considerations.

Since affordable and efficient units are often hard to come by, many municipalities throughout the US are coming up with innovative ways to combat this. Accessory dwelling units (ADU) are one example being instituted in many cities. This alternative housing model, often referred to as a granny flat or mother-in-law apartment, provides separate residential units that are either attached or detached from the primary homes on the same lot. ADUs may offer an affordable way for seniors to maintain their privacy and independence while remaining part of their community. They also may provide options and/or income to the property owner by allowing family members or caregivers to live near by, providing rental income from either the primary dwelling or the ADU, and allowing inhabitants to utilize the different dwelling units on the property as the needs of the family change.

Resources

- Energy Saver Guide: Tips on Saving Money and Energy at Home, US Department of Energy
- Low-Water Native Plants for Colorado Gardens, CSU Extension
- Backdoor Revolution: The Definitive Guide to ADU Development, Kol Peterson

Affordability & Maintenance:

Minka Homes & Communities

Affordable, Accessible, & Compact Dwellings

PROBLEM

There are many changes that arise as families and individuals evolve and age. Decreased income and the need for better living space without leaving a property may become necessary. As the availability of affordable and accessible homes throughout the United States is limited, Minka Homes saw an opportunity for creating affordable units and communities that accommodate to the needs of a growing senior population.

PROCESS

Geriatrician Dr. Bill Thomas developed a home design process called the Minka Project to address the needs of creating affordable and accessible homes and communities for seniors. The project uses compact dwelling units called Minkas, designed to maximize independence for seniors through efficient and adaptable design. These homes employ universal design principles and are pre-fabricated to create customized plywood panels and build low-waste, energy-efficient, and affordable homes.

SOLUTION

The University of Southern Indiana, with support from the AARP, has begun a pilot project using the Minka Homes compact dwelling unit. This project will feature a multi-generational community of Minka Homes for both students and older adults, both often in need of affordable housing. Dr. Thomas envisions a community where students live and study in close proximity to older adults, with a focus on fostering what Thomas calls "independence together" through social engagement, healthy eating, and physical activity.

CONCLUSION

Colorado Lifelong Homes Certification Program

It is clear that the senior population in Colorado and beyond is growing and will continue with this trend. It is also clear that appropriate housing options that accommodate the changing needs of that population, and others who require greater accessibility in their home environment, are not evolving to match. As the need for age friendly housing in Colorado continues to grow, it is important that steps are taken to further prepare for this.

Research shows that housing options that support ongoing changes in people's needs and successful aging-in-place are the most desirable approaches to this issue. These approaches not only help to accommodate people's changing physical needs, but also support their long-term independence, wellbeing, overall health, and vitality. They also help to keep individuals connected with their community, which is of enormous benefit to them, as well as to the community. Colorado currently has no statewide organization bringing awareness to the need for aging in place or the features of age-friendly design. We would like to change that.

In talking with a variety of partner organizations and individuals within the community, we have found that the creation of standards, educational resources, and networking mechanisms for building and marketing appropriate homes is a priority. We propose that the path forward toward these goals and overcoming market barriers is the creation of the Colorado Lifelong Homes Certification Program. This would be the first statewide home certification program of its type in the U.S.

The Institute for the Built Environment has partnered with a number of organizations to work toward the creation of the Colorado Lifelong Homes Certification, including:

- Larimer County Partnership for Age-Friendly Communities (PAFC)
- Colorado State University's Center for Health Aging and Extension Offices
- Wade Buchanan, Colorado State Senior Advisor on Aging
- Colorado's Strategic Action Planning Group on Aging (SAPGA)
- The Lifelong Colorado Initiative by the Department of Local Affairs (DOLA)
- American Association of Retired Persons (AARP)
- National Association of Home Builders (NAHB)

IBE is working with these groups, and developing additional relationships, to garner input and support for the development of the Colorado Lifelong Homes Certification Program. Work with these partners will help to ensure that the program will adequately provide the resources and meet the needs of the broadest possible range of stakeholders and communities in Colorado.

The Path Forward

In 2019, IBE and our partners will develop, launch, and pilot the Colorado Lifelong Homes Certification Program. The certification program will include both required and optional credits organized within the five key themes presented in this paper, including:

- Walkability & Community
- Visitability
- Universal Design
- Safety & Fall Prevention
- Affordability & Maintenance

Documentation for the certification program will include a detailed reference guide that illustrates and defines the requirements and reasoning for each credit, submittal requirements, and how credits are to be evaluated and awarded. Additional education and marketing tools will be created to educate the public, as well as those seeking certification, on the benefits of Lifelong Homes.

The Lifelong Homes Certification Program will be initially launched and tested through engagement with home development partners in Larimer County in one to three pilot certification projects. Our team will guide the development partners through the certification process and credits, review home designs to determine achievement levels, and provide the third-party certification of these homes as Lifelong Homes. The results of these pilot projects will be fully documented and published online as case studies to measure success and prepare for future development and statewide expansion of the certification program.

The PAFC is currently conducting an assessment of seniors in Larimer County to evaluate current issues in housing that seniors in our community are facing. After the survey results are gathered, our team will work collaboratively with CSU Extension to develop free education tools for older adults in our community and distribute these to additional partners throughout the state to assist seniors in making informed decisions about the design of their existing home or to prepare them for a new home purchase. Additionally, we plan to widen industry knowledge by offering education and workshops to help further educate home builders and developers on the benefits of aging in place and the features of lifelong homes.

Many Colorado communities have begun to prioritize senior housing needs and the need to incentivize the market. Although the Colorado Lifelong Homes Certification Program is only a start to tackling these issues, we are confident and hopeful that it will ultimately better the lives and wellbeing of older adults throughout the state. We have already begun reaching out to similar organizations and programs across the U.S. to build a coalition that can begin working toward a standardized national certification program, as well. These efforts will not only strengthen the activities taking place in Colorado, but will also serve vulnerable populations in states that may not have the initiative or means to create such a program on their own. In addition, a national certification will bring unity and clarity to the market, resulting in increased awareness and marketability overall.

For more information and updates, visit:

https://lifelonghomes.org/

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