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PAS REPORT 579

PLANNING AGING-SUPPORTIVE COMMUNITIES

Bradley H. Winick, AICP, LEED, and Martin Jaffe

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ON THE COVER

2004 Grand Prize Winner, Generations United Photography Contest (*L. Roger Turner*)

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The population of the United States is aging at a pace historically unprecedented. This statistical demographic reality is indisputable, yet not every city and community is addressing this reality in policies and planning efforts. Planners and public officials have no choice other than to confront the challenges and opportunities that are part of this aging phenomenon, or they risk being caught unprepared by the impacts.

What is to be done? How should planners and public officials respond when they are eventually tasked with coming up with strategies to address their aging communities? The purpose of this report is to help planners and public officials craft strategies to make their communities more aging supportive, and it is intended to serve several important and related functions:

- It is a *call to action* to help planners and public officials demonstrate that these issues are important and timely and that they need to be thoughtfully addressed.
- It is a *primer* to give planners and public officials a background understanding of the context and important components of aging-related issues.
- It is a *strategic guide* that will help planners and public officials recognize the importance of addressing these issues in an integrated and interdisciplinary way.
- It is a *resource guide* to familiarize planners and public officials with good examples of aging-supportiveness plans and programs in a range of cities and communities throughout the United States and to point them toward sources of additional information.
- It is a *source of strategic recommendations* to help planners and public officials craft appropriate aging-supportiveness plans and programs that best leverage their communities' existing assets and address specific needs, as the best plans are those crafted to reflect the particular contexts, histories, assets, and infrastructures of communities.

DEMOGRAPHICS

In the U. S. in 2010, there were 40.3 million people age 65 and older, 12 times the number in 1900. The percentage of the overall United States population age 65 and over increased from 4.1 percent in 1900 to 13.0 percent in 2010; it is projected to reach 20.9 percent by 2050. People age 85 and older are the fastest-growing cohort among older adults in both absolute numbers and percentages. Generally speaking, the U.S. older-adult population is growing steadily, with increasing numbers of older adults living longer, healthier lives and contributing to their communities and to society in general. This phenomenon is occurring despite the simultaneous increase in the number of older adults living with one or more chronic diseases or disabilities, including the explosive growth of Alzheimer's and other cognitive diseases. It is highly conceivable that this situation will continue through 2050 and beyond.

Older adults have a wide range of abilities, needs, and disabilities, and the common physical changes related to aging—such as those related to vision, hearing, and mobility—are different than disease-related changes. Communities should plan for and address this spectrum of older-adult health-related considerations. Over 38 percent of individuals age 65 and over had one or more disabilities in 2010, with the most common difficulties being walking, climbing stairs, and doing errands alone.

Of the population age 65 and over, 96.4 percent lived in various types of housing within their communities (including single-family homes and multifamily homes), while only 3.6 percent resided in group quarters (such as nursing facilities). Eleven million individuals age 65 and older, or 28.3 percent of the household population, lived alone. The population age 65 and over had a roughly 80 percent homeownership rate, much higher than the 65 percent for householders under age 65, and older householders tended to own older housing stock.

Eleven states had more than 1 million people age 65 and older in 2010. States with the highest proportions of older adults in their populations in 2010 included Florida, West Virginia, Maine, and Pennsylvania (all above 15 percent). The West and South regions experienced the fastest growth in their 65-years-and-over and 85-years-and-over populations between 2000 and 2010. Nearly half of households age 50 and over live in suburban and exurban areas; the other half are evenly divided between central cities and rural communities, with slight regional variations (Joint Center for Housing Studies 2014).

HOUSING AND AGING IN COMMUNITY

This report takes a community-centric (aging-in-community) rather than a dwelling-centric (aging-in-place) approach, and emphasizes planning considerations and initiatives at the city or community level rather than at the level of an individual dwelling unit. This is not to suggest that specific older adults cannot healthily and successfully age within their current dwellings. Rather it suggests that no single solution works for all individuals and that planners and policy makers should focus on the establishment and support of a range of appropriate dwelling options in cities and communities. While this statement is true for all residents of all ages, it is particularly true for older adults who may be facing a range of evolving health care, transportation, financial, and other circumstances and needs.

Understanding where and how older adults currently live is important in promoting more aging-supportive communities. The following characteristics about the older-adult population and challenges and approaches to addressing housing help frame this context:

- The vast majority of older adults live in traditional community housing, while very few older adults live in "older-adult housing."
- Many of the communities in which older adults live are aging along with their residents.
- A growing number and variety of older-adult housing typologies exists.
- Older adults are more likely than others to own their own dwelling units.
- Older adult homeowners and renters often live in different places.
- Affordable housing, particularly rental housing, is a significant concern for older adults.
- In part because older women live longer than older men, they are much more likely to live alone.
- Older adults living alone often have less support and fewer financial resources.
- Lesbian, gay, bisexual, and transgender older adults face many specific aging issues.
- A high number of older adults live in dwellings that are not safe or adequate for their physical needs.

The recent recession eroded the net worth of households of all ages. While the recession's specific impacts on older adults are still being analyzed and evaluated, the percentage of older adult homeowners who still have mortgages on their homes has risen in recent years, in part due to the recession. It is unclear the extent to which this will influence their future housing choices. Since older adults are more likely than younger homeowners to have paid down or paid off their mortgages, their overall net worth may have been less affected (Joint Center for Housing Studies 2014; U.S. Census Bureau 2014). However, older adult homeowners owe more on their homes than in previous years (Harrell 2011).

A range of existing and emerging issues affect the housing needs of the older-adult populations and the strategies used to address these needs. New technological innovations address transportation, health care, disease management, financial strategies, telecommunications, social engagement, commerce, and other aspects of daily living. Access to a community's social, cultural, economic, educational, and recreational assets is particularly important and considered a critical ingredient of an older adult's ability to successfully and healthily age in community. Planning efforts can help with issues such as community opposition to older-adult housing and safety concerns.

Planning for Older Adults and Housing

Cities and communities throughout the country have developed a range of creative and effective programs to address the challenges in providing and encouraging a range of appropriate and affordable housing options for older adults. These promising practices help provide a foundation for developing an even broader array of aging-supportive cities and communities throughout the United States. While many cities and communities at least touch upon the needs of older adults as part of their comprehensive, general, or master plans, not many of these plans address these needs in greater detail. Several communities, however, have developed freestanding older-adult housing plans to specifically address where older adults will live in their communities in the future.

Health care provision will increasingly rely on community- and home-based care rather than institutionalized care, as codified by the Affordable Care Act and other federal and state legislation and policies. This paradigm shift, in conjunction with the financial pressures the health care industry faces, will likely give rise to new community-based housing models that better link human services and health care with residents. Planners should be aware of such developments because planning can play an important role in supporting these efforts by eliminating zoning codes, building codes, and other local regulatory or institutional barriers.

Some types of housing for older adults already focus on improving linkages between residents' housing, human ser-

vice, and health care needs, based in part on goals to reduce transportation needs, automobile reliance, and dependency on institutional care. Naturally occurring retirement communities (NORCs) and NORC supportive service programs (NORC-SSPs) are a phenomenon where aging communities evolve over time in places not initially intended for aging in community. A number of municipalities and communities have established and operated housing assistance programs that typically offer a range of programs, often including one or more programs specifically targeted toward meeting the housing needs of older adults. In addition, public housing authorities and managers are important partners in the creation and operation of aging-supportive communities. A growing number of public housing authorities across the country have developed a range of creative strategies to support their residents as they have aged and their needs have evolved.

Aging-in-community strategies can also focus more specifically on the built environment. Design that promotes accessibility, visitability, and universal design and that allows for flexible housing options (such as accessory dwelling units and shared housing) can help meet the evolving needs of the burgeoning older-adult population.

MOBILITY AND OLDER ADULTS

Older adults have most of the same mobility needs as their younger peers: shopping, visiting family and friends, running errands, going out for dining and entertainment, and accessing medical and public services. One of the only major differences in travel behavior is that older adults take fewer journey-to-work trips—a substantial fraction of a younger household's annual travel demand—consistent with the fact that many older individuals are retired or no longer work full time.

Given today's economic trends and realities, however, even these traditional travel assumptions are suspect, as stagnant (and, when adjusted for inflation, even declining) wages, the increased cost of living, and inadequate retirement savings force more older adults to continue to work full time for a longer period of their lives in order to maintain an adequate standard of living and an acceptable quality of life (Scommegna 2014). These economic constraints together with the physical limitations of older travelers—sensory impairments in hearing and vision, slower walking paces, more limited joint mobility, and slower reaction times, for example—pose challenges to planners for understanding and addressing the mobility needs of this population. Older Americans, however, do predominantly depend on the use of private automobiles to meet almost all of their mobility needs (Federal Highway Administration 2013). Given the dominance of travel by private automobile for older adults, planners who want to accommodate and promote aging in community will need to address the special planning issues raised by older motorists and passengers.

Planning for Older Motorists

Automobile use remains the primary travel mode for older adults, with those ages 65 to 84 taking about 90 percent of all their trips by car (Rosenbloom 2009). Rosenbloom (2009, 35) also notes that "even those 85 and older take 80 percent of their trips by car, driving half the time. In fact, in 2001, older people actually made a greater percentage of their trips as drivers than did people between ages 25 and 64." She also observes that automobile travel is a significant travel mode even for those who do not drive, suggesting that many of these nondriving older passengers are dependent on other drivers, many of whom are often also older in age, to meet their mobility needs. In addition to increasing the mobility of older adults, the driving provided by friends and caregivers also reciprocally increases their social access to, and social interaction with, their older passengers.

Traffic safety issues are a primary concern in planning for older drivers. One strategy for improving safety among older drivers is in-person elderly license renewal programs. These programs have been shown to reduce driver fatality rates, especially among the oldest drivers (ages 75 to 84). A second way to address traffic safety is the periodic retraining or re-education of older drivers, especially where prior motor vehicle collisions or testing during driver licensing renewals indicate potential safety risks. A third approach is to increase the survivability of older drivers and their passengers in case of accidents. This essentially involves the design of automotive safety systems and the improved design of roadways and intersections. Most planning interventions involve the third approach to older driver safety—improving road conditions, signage, lighting, and signalization.

Planning for Older Pedestrians

Despite the benefits of walking and movements to encourage pedestrism, only about nine percent of all trips taken by those age 65 and older are walking trips (Rosenbloom 2009). Rosenbloom (2009, 35) also notes that "for older adults who don't drive (almost all women), walking accounts for almost one out of every four trips, with its importance increasing with age." This implies that walking will likely become an even more important travel mode as the urban population

continues to age. In addition, the fact that a growing number of older pedestrians are likely to be female suggests that planners may need to address public safety issues along with more traditional pedestrian mobility concerns in planning more walkable cities and denser suburbs. Older adults tend to have some different physical characteristics than younger adults, even as pedestrians, including vision problems, decreased agility, slower reflexes, and reduced stamina. They are also less resilient when injured; older pedestrians tend to be much more susceptible than younger adults to serious injury and death resulting from accidents, especially collisions with cars.

Licensing, training, and design measures seek to reduce the risks of vehicle collisions involving older drivers by reinforcing the rules of the road, requiring safer cars, and ensuring that older drivers maintain the perceptual and cognitive capabilities needed for safe driving. Many of these programs also seek to protect older pedestrians from such collisions by encouraging and promoting safer road crossings. Most of these age-related recommendations have already been put into place by most states, and compensatory design features for many of the physical impairments of an aging population have also already been addressed by required compliance with the Americans with Disabilities Act's design guidelines within the public realm. Environmental design features that can help older pedestrians include traffic calming, appropriate signalization standards, the prioritization of pedestrianism, land-use planning that sites facilities for older adults near streets with lower traffic volumes, and the better design of pedestrian facilities and roads.

Planning for Older Transit Riders

There is a strong assumption by some planners that after older adults stop working, they rely on public transit services as their major travel option. In fact, there is far more evidence that older adults are even less likely to use public transit when they are no longer in the labor force. Rosenbloom (2009) finds that only about 1.3 percent of trips by those 65 and older were made using any form of public transit, a lower use of transit than by younger people. She also reports that older nondrivers—those who have never driven; those who have stopped driving because of their age-related impairments; those who have been forced to stop driving by a licensing authority after screening or an accident; or those who can no longer afford to own, park, or maintain their cars—made only about 8 percent of their trips using public transit.

But more recent data from the 2009 National Household Travel Survey show that these low transit ridership trends might be in the process of reversing (Lynotte and Figueiredo 2011). The travel survey data indicate that 2.2 percent of trips by people over age 65 were on public transit in 2009, an increase of 40 percent over the rate of transit use by older riders in 2001. Despite these increases, older adults, even those with disabilities, are still more likely to travel to their destinations as automobile drivers and passengers in private motor vehicles than as public transit riders (Sweeney 2004).

Even though transit ridership by older adults increased by about 40 percent between 2001 and 2009, many impediments to transit use by older adults still exist: concerns about safety, the inability to pay fares, the lack of awareness of transit options, the inability to walk to buses or trains, the difficulty getting into transit vehicles, the inability to travel alone (because of mental or physical impairments), and the fear of getting lost (Beverly Foundation 2004). Strategies to increase ridership by older adults include improving safety and security, providing rider training and real-time travel information, and creating custom and subsidized services.

Planning for Older Cyclists

Because of declining physical resiliency as people age and the resultant greater risk of harm from falls and accidents, promoting safer bicycling becomes a higher priority issue for older cyclists. These safety issues are complicated by some of the physical constraints of aging, including reduced muscle mass and joint flexibility, slower reaction times, and often more limited vision, which can make it harder for older cyclists to adequately assess adjacent traffic hazards and road conditions. Coupled with other safety training issues (such as poorly adjusted helmets, the improper adjustment of seats and handlebars, and riders not following the rules of the road), having physically impaired older cyclists safely share the road with cars, buses, other bike riders, and pedestrians can pose quite a challenge (Hayes, Henslee, and Ferber 2003).

Grade-separated bike paths and sound bike-lane design are probably the best approaches to protecting the safety of older cyclists. The Federal Highway Administration's (2009) guidelines recommend that bike lanes be four to five feet in width, depending on whether the streets are curbed and whether they have curbside parking, and that multiuse paths be a minimum of 10 feet in width. Separation from automobiles and traffic-calming measures (such as speed bumps) can help older cyclists feel safer when biking. Rest areas are also a useful amenity for older cyclists lacking the strength and physical capacity to cycle continuously for long times or distances.

THE PUBLIC REALM AND PUBLIC SERVICES FOR AGING IN COMMUNITY

While much of the open space within a city or community is privately owned and operated, public-sector agencies own, maintain, and oversee other key elements of the public realm, including many roadways and sidewalks, parks, municipal facilities and spaces, and portions of most waterfronts and open-space venues. The public sector also plays a significant and evolving role in the provision of public and human services, and the nature of those services plays a substantial role in the resulting aging supportiveness of these cities and communities. As these populations grow and change, the service roles and realities of providing these services will change as well, with a combination of private, nonprofit, and hybrid service providers also playing important roles in basic service provision and the ability of older adults to successfully age in community.

Public Health and Health Impact Assessments

Some communities and regions have learned that linking planning and public health initiatives and programs provides better opportunities for building the types of coalitions that can foster political and community support. Not working in professional or institutional silos can also help communities more efficiently leverage scarce financial resources to further multiple objectives. Cities, counties, and communities are working to develop better models to deliver health care to an increasing number of older adults, the great majority of whom are living independently throughout their communities. These jurisdictions are working in partnerships with private-sector entities, consumers, and other stakeholders to plan services, such as adult day care, chronic disease self-management programs, and other programs to support the ability of older adults to healthily age in community. As aging communities grow and their needs continue to increase, developing these planning and public health links will become even more crucial.

Health impact assessments (HIAs) are an evaluation process to help "policy makers take advantage of these opportunities by bringing together scientific data, health expertise, and public input to identify the potential—and often overlooked—health effects of proposed new laws, regulations, projects, and programs" (Pew Charitable Trusts 2015). HIAs can help to assess the potential health impacts of proposed projects or programs on specific or vulnerable populations, such as older adults.

Public Spaces and Services

Planning the public realm and public services for older adults involves addressing a number of issues and using a variety of approaches. For example, good wayfinding can enhance access to goods and services; make walking, cycling, and transit use easier and safer for residents and visitors; and help people become engaged with their communities. A well-designed wayfinding program can support the abilities of a wide range of users—including older adults and others with diminished perception skills and related needs—to successfully live in and navigate their communities.

Parks, public squares, plazas, waterfronts, and forest preserves are common and play important civic roles. But less obvious open spaces—such as streetscapes and spaces in public, educational, and civic buildings—can also provide important community-building functions. In addition, most communities contain an array of privately owned open spaces, such as parking lots, business and industrial park yards, and cemeteries. A number of cities and communities are looking at strategies to link programmatically, and even physically, a number of public and private open spaces in order to develop community-wide open-space systems.

The semi-public and public spaces known as "third places" are also important in fostering aging in community. The notion of social capital refers to the collection of familiar human networks, organizations, and physical spaces that link individuals to their environments; third places are key elements in developing social capital in communities. As communities continue to age and the number of older adults wishing to age in community increases, aging-supportive communities will be those that nurture third places and the development and maintenance of social capital. Senior centers and joint-use public facilities are additional locations where older adults can access formal and informal social services. Tactical urbanism is another way to enhance the public realm and link it to public services. It is a strategy intended to promote small-scale, community-based livability enhancements and community aging supportiveness by providing the types of public-realm improvements that make open spaces more accessible and allow for valuable services for older adults, such as access to fresh produce and gathering spaces for social engagement.

In terms of service provision, the growing number of older adults—overall and those aging in community—together with the decrease in the financial resources of cities and communities has led to the search for innovative and fiscally efficient ways to provide basic human and health care

services. Helpline operators, emergency service workers, first responders, and other staff from community organizations and public agencies are playing more enhanced service-provision roles and are increasingly acting as connections to older adults needing services. This has resulted in programs around the country that train employees to work in these capacities with aging populations. In the event of an emergency or disaster, area agencies on aging are particularly crucial due to their extensive experience meeting the needs of older adults and their established role as trusted community resources.

Advances in technology and "big data," collections of large data sets, are additional factors that will change service provision and delivery for older-adult populations. The world of health care has transformed over the past few years, and a range of technologies continues to be developed to support the growing community-based older-adult population, a group that will have an increasing level of comfort with and aptitude for handheld and other computer-based technologies. Applications of big data should be able to assist planners, public officials, and other stakeholders as they work to develop aging-supportive communities. Large-scale datasets on health-related behaviors, diseases, injuries, and causes of death can help decision makers identify and address health problems more effectively. In addition, information about the social factors that influence health can help planners and public officials better understand many of the community-level influences that affect health outcomes.

PLANNING AGING-SUPPORTIVE COMMUNITIES

A growing number of communities throughout the country have started to recognize the issues, opportunities, and challenges related to their aging populations. In many cases, a community's planners and public officials will be asked to provide guidance or develop programs to address this issue and enhance the community's overall aging supportiveness. While there might be an awareness of existing aging-supportiveness programs, the array of different national, regional, and local programs can be confusing and the type of program most appropriate for a particular community can be difficult to determine.

Exemplary examples of aging-supportiveness programs exist at the international, national, regional, and community levels. One approach to categorizing these programs is to consider the geographic scope or location of a program. These programs, however, can also be considered in terms of their approaches to help communities identify the best strategies for their local circumstances and needs. The programs can be grouped into three categories:

1. **Formally structured programs:** Some programs—along with the individualized local programs developed from these approaches—are formally structured, with specific assessment and development stages.
2. **Funder- or program-specific programs:** During the early years of aging-supportiveness programs, various national and state sponsoring or funding agencies developed specific program structures and protocols. Participating cities and communities—which often were selected based on their responses to specific requests for proposals—implemented customized versions of these structures and protocols, with sponsors or funders influencing local program design. These types of programs were typically more loosely structured than were the formally structured programs.
3. **Grassroots and community-based programs:** Other aging-supportiveness programs, primarily but not exclusively local ones, took a more individualized approach based less on existing program models. Such programs have taken a wide variety of strategic and program development approaches but have been based on grassroots and community-organizing strategies.

In recent years, numerous aging-supportiveness program assessments, indices, and rankings have also been developed to evaluate the range of programs in different cities, communities, regions, and states.

A review of aging-supportiveness programs in the three typology categories at different geographic scales suggests a number of key lessons for planners for the development of programs in any city or community:

- **Commitment and leadership are critical:** Successful programs will need reliable political and institutional commitment and leadership; developing an enduring aging-supportiveness program will only happen with both of these, and relying solely on one pillar for support is not prudent.
- **Funding—especially local funding—is fundamental:** Developing and operating an aging-supportiveness program will incur startup costs and require ongoing operational funding. A lack of advance planning for staff and consultant costs and ways to sustain efforts has led to failure in the past.

- **Programs should be broad based and inclusive:** Successful programs are generally those that include a wide range of individual and institutional stakeholders. Programs that seek out hard-to-reach stakeholders will likely benefit greatly.
- **Visibility is crucial:** Programs developed behind closed doors and with limited stakeholder input or public visibility are most likely to be programs that will not receive widespread community support. A program should not be unveiled to the public; rather, it should be developed with the public.
- **Flexibility and nimbleness are important:** Any aging-supportiveness program will likely need to weather changes in the local political, social, and institutional environments. Adaptability is an important program asset that encourages sustainability.
- **Implementation should not be neglected:** Plans or programs that are not developed with adequate attention and commitment to implementation are those plans or programs that are most likely to simply gather dust on bookshelves. Some entity will need to oversee a program's implementation.
- **A key activity is building and joining coalitions:** Linking aging-supportiveness programs to other programs and agendas helps leverage efforts. If a local aging-supportiveness coalition does not exist, organizations should move to form one.
- **Early victories are meaningful:** Good publicity matters, and program should seek it out for small, inexpensive, and tangible successes.

Each community must evaluate its needs, challenges, and current assets as it develops a locally appropriate aging-supportiveness strategy. In addition, each community will find itself at a different point in this process. While some communities are already quite engaged in these efforts, others are only now beginning to realize that changing demographics will require more dedicated planning.

Any community starting or continuing the process of planning for older adults can ask the following questions: Which key community aging-supportive components are already in place and which are missing? Are the right stakeholders already involved in and committed to this effort? If not, who is not involved? If there is not already an ongoing discussion on aging supportiveness, can communities broaden existing livability or sustainability agendas to also include aging supportiveness?

The path to creating aging-supportive communities for everyone may not be easy, but the urgency is growing, particularly as demographic, institutional, and societal shifts occur in domains such as aging, health care, transportation, and municipal finance. The time to begin planning an aging-supportive community—if that process is not already underway—is now.

CHAPTER 1

PLANNING CONTEXT

The population of the United States is aging at a pace historically unprecedented. This statistical demographic reality is indisputable, yet not every city and community is addressing this reality in policies and planning efforts. Planners and public officials have no choice other than to confront the challenges and opportunities that are part of this aging phenomenon, or they risk being caught unprepared by the impacts.

Cities and communitues are already feeling the effects. As part of the 2011 "The Maturing of America—Communities Moving Forward for an Aging Population" project, led by the National Association of Agencies on Aging and involving a number of participating organizations (including the American Planning Association), local governments identified the top three challenges their communities faced in meeting the needs of or planning for older adults. The challenges most often cited were financial and funding shortages, transportation, and housing. The top three challenges identified in 2005 were housing, financial issues, and health. Clearly cities and communities believe that something must be done to address these issues (National Association of Agencies on Aging 2011).

What is to be done? How should planners and public officials respond when they are eventually tasked with developing strategies to address the needs of their aging communities? The goal of this report is to assist in identifying appropriate answers to these questions and to help planners and public officials craft community-specific strategies to make their communities more aging supportive. This report is intended to serve several important and related functions:

- It is a *call to action* to help planners and public officials demonstrate that these issues are important and timely, and they need to be thoughtfully addressed.
- It is a *primer* to give planners and public officials a background understanding of the context and important components of aging-related issues.
- It is a *strategic guide* that will help planners and public officials recognize the importance of addressing these issues in an integrated and interdisciplinary way.
- It is a *resource guide* to familiarize planners and public officials with good examples of aging-supportive plans and programs in a range of cities and communities throughout the United States and to point them toward sources of additional information.
- It is a *source of strategic recommendations* to help planners and public officials craft appropriate aging-supportive plans and programs that best leverage their communities' existing assets and address specific needs, as the best plans are those crafted to reflect the particular contexts, histories, assets, and infrastructures of communities.

AGING TERMINOLOGY

A variety of terms are used somewhat interchangeably in the literature on aging and communities. Terms used to describe the process of consciously developing and operating communities supportive of people throughout their lifespans include *aging in community*, *aging in place*, *successful aging*, *healthy aging*, and *smart growth*. A number of terms describe communities that are supportive of residents' ability to age within the community rather than moving at some point to a community more supportive of their evolving needs, including *aging-supportive communities*, *age-friendly communities*, *lifelong communities*, *elder-friendly communities*, *lifecycle communities*, *livable communities*, *lifespan communities*, *ageless communities*, and *multigenerational communities*. Even terms used to refer to older individuals themselves differ among various stakeholders, with *older adults*, *senior citizens*, *seniors*, and *elders* used somewhat interchangeably.

For purposes of consistency and clarity, this report primarily uses the terms *aging-supportive communities, aging in community,* and *older adults*. *Aging-supportive communities* is used in part because many of the alternative terms refer to specific community-focused agendas or programs, and the intent of this report is instead to address the broader issues. In addition, the important societal and community issues being addressed should be seen as going beyond simple "friendliness."

In general, this report's approach takes a communitarian perspective, which is why the term *aging in community* is used rather than *aging in place*. To many, this latter term suggests an emphasis on people remaining in their current dwellings and is therefore often overly dwelling-centric rather than community-centric. The only exceptions to these nomenclature preferences are when specifically referencing existing programs, protocols, or institutions. Finally, *older adults* is used partly in recognition of those individuals who feel marginalized by some of the alternative terms.

In addition, different data sources, reports, and programs use different age demarcations in defining older adults. Some reports use 60 years and older and others 65 years and older, while others go the other direction and use either 45 years or 55 years and older. This report does not take a particular stance on the age when an individual is an older adult; it instead will indicate the specific age definitions of older adults as used in cited references or specific programs.

DEMOGRAPHICS

While this report does not focus on demographics or contain extensive demographic information, some of the key findings in the U.S. Census Bureau's *65+ in the United States: 2010* report describe characteristics of the older population in the United States and are summarized in the following discussion (West et al. 2014).

Increasing Numbers of Older Adults

In the U.S. in 2010, there were 40.3 million people age 65 and older, 12 times the number in 1900. The percentage of the overall U.S. population age 65 and over increased from 4.1 percent in 1900 to 13.0 percent in 2010; it is projected to reach 20.9 percent by 2050. People age 85 and older are the fastest-growing cohort among older adults in both absolute numbers and percentages.

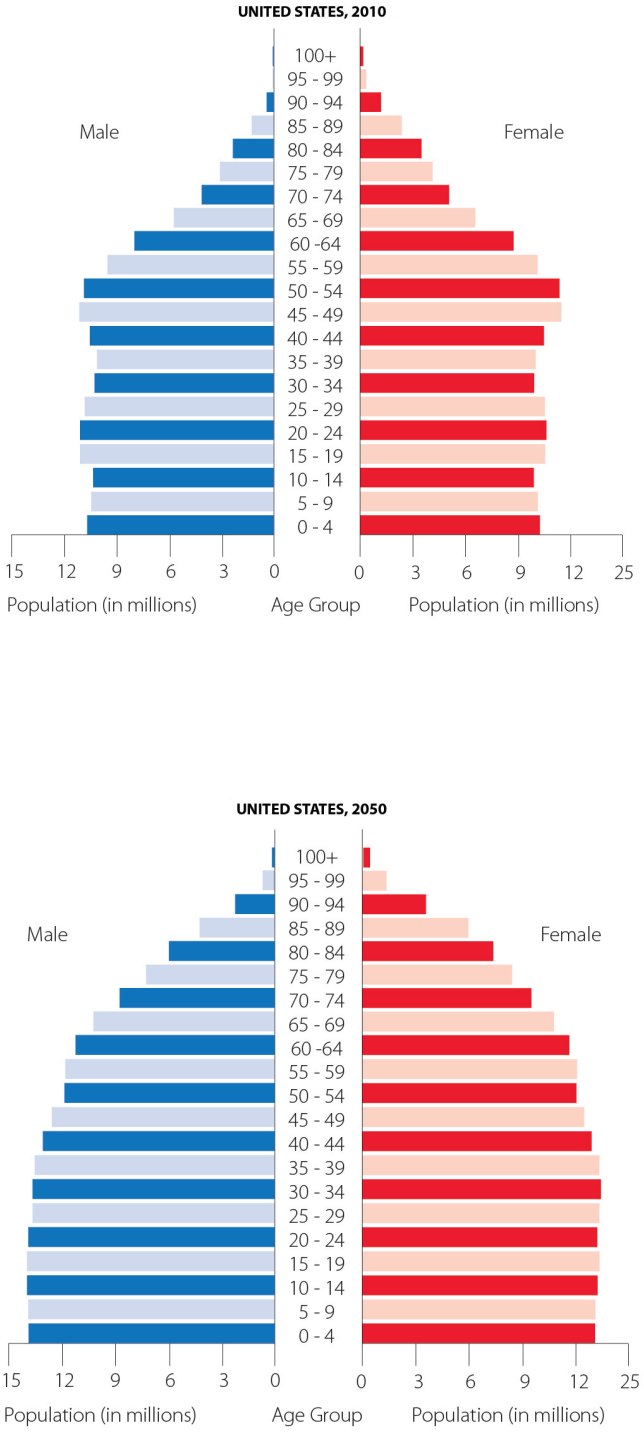

Figure 1.1. U.S. population pyramid, 2010 and 2050 (Source: West et al. 2011; data from 2010 Census and 2012 National Population Projection)

Long-Term Population Structure Changes

The aging of the U.S. population is not a short-term phenomenon caused simply by the aging of the baby boomer generation born between 1946 and 1964. Lengthened life expectancies, paired with declines in birth rates and mortalities, are projected to change the shape of the population age structure from pyramidal to rectangular through 2050 and beyond (Figure 1.1).

Generally speaking, the U.S. older-adult population is growing steadily, with increasing numbers of older adults living longer, healthier lives and contributing to their communities and to society in general. This phenomenon is occurring despite the simultaneous increase in the number of older adults living with one or more chronic diseases or disabilities, including the explosive growth of Alzheimer's and other cognitive diseases. It is highly conceivable that this situation will continue on in coming decades.

Health Characteristics of Older Adults

Older adults have a wide range of abilities, needs, and disabilities, and the common physical changes related to aging—such as those related to vision, hearing, and mobility—are different than disease-related changes. Communities should plan for and address this spectrum of older-adult health-related considerations. The death rate related to Alzheimer's disease rose more than 50 percent from 1999 to 2007, in contrast to declining mortality rates due to other causes. Over 38 percent of individuals age 65 and over had one or more disabilities in 2010, with the most common difficulties being walking, climbing stairs, and doing errands alone. The share of the older population residing in skilled nursing facilities declined nationally from 4.5 percent in 2000 to 3.1 percent in 2010.

Housing Characteristics of Older Adults

Of the population age 65 and over, 96.4 percent lived in various types of housing within their communities (including single-family homes and multifamily homes), while only 3.6 percent resided in group quarters (such as nursing facilities). Eleven million individuals age 65 and older lived alone, or 28.3 percent of the household population. Among men 65 years and older, 18.8 percent lived alone, while 35.7 percent of women 65 years or older lived alone. Of older adults living alone, 71.2 percent were women and 28.8 percent were men. The population age 65 and over has a roughly 80 percent homeownership rate, much higher than the 65 percent for householders under age 65, and older householders tend to own older housing stock.

Locational Characteristics of Older Adults

Eleven states had more than 1 million people age 65 and older in 2010. States with the highest proportions of older adults in their populations in 2010 include Florida, West Virginia, Maine, and Pennsylvania (all above 15 percent). The West and South regions experienced the fastest growth in their 65-years-and-over and 85-years-and-over populations between 2000 and 2010. Nearly half of households age 50 and over live in suburban and exurban areas; the other half are evenly divided between central cities and rural communities, with slight regional variations (Joint Center for Housing Studies 2014). The vast majority of older adults do not move, but the rates of older adults moving remained stable between 2000 and 2010, in contrast to the slowdown in migration among younger populations. Among all older adult movers, 59 percent moved within the same county and 20 percent moved to a different county within the same state. They typically attributed such moves to wanting to be closer to family or for health reasons. Older adults primarily live scattered throughout the communities familiar to them from earlier in their lives.

AGING: KEY CONCEPTS

Before examining the planning issues related to aging populations, this report provides a review of key aspects of aging science and practice in the United States.

Life Expectancies

Advances in medical science, reduced infant mortality rates, more proactive health care, and healthier individual lifestyle choices have led to longer life expectancies than in earlier decades. Life expectancy projections at birth in 1950 were 71 years for women and 66 years for men, and they currently are approximately 80 years for women and 75 years for men. There is some dispute as to reasonable life expectancy projections at birth for 2050. The MacArthur Foundation's (2010) Research Network for an Aging Society reports that earlier U.S. Census Bureau projections underestimated life expectancies by three to eight years and projects life expectancies in 2050 at between 86 and 90 years. Life expectancy projections are rather controversial, as some suggest that increasing obesity-related diseases could cause a flattening or even a decline in American life expectancies over this timeframe, while others suggest that continually increasing life expectancies will lead to many people born in the developed world reaching 100 years of age (Olshansky et al. 2009).

Compressed Morbidity and the Longevity Dividend

James Fries, a professor of medicine at the Stanford University School of Medicine, developed the concept of the "compression of morbidity" in 1980. This idea held that if the age of the onset of an individual's first chronic infirmity could be increased more rapidly than increases in life expectancy, then the illness burden could be compressed into a shorter period of time nearer to the age of the individual's death. Relative compression of morbidity occurs if the amount of life after the first chronic infirmity decreases as a percentage of life expectancy (Fries 2005).

Sherwin Nuland (2007, 230) from the Yale University School of Medicine further described the compression of morbidity: "Instead of a long period of worsening frailty and illness, our bodies would stay relatively intact and then give out much closer to the time of eventual demise." The late preeminent gerontologist James Butler (2008) expanded the idea of the compression of morbidity to a "longevity benefit" for society at large. The central theme of this report, that of the value of developing and operating aging-supportive communities, is consistent with these compression of morbidity and longevity benefit goals.

Successful, Active, and Positive Aging

Scientists and researchers have long attempted to understand how to promote longevity and positive states of health in later life, which increasingly was referred to as "successful aging." In the 1970s and 1980s, several formal models of successful aging emerged, with Rowe and Kahn's (1987) model being perhaps the most influential. Their model characterized successful aging as involving three components:

1. Freedom from disease and disability
2. High cognitive and physical functioning
3. Social and productive engagement

More recently, gerontologists and others have begun using the terms *active aging* or *positive aging* in part to address the reality that some individuals are not able to live free of disease or disability but should not be excluded from discussions of health and well-being.

While the first two components of Rowe and Kahn's model are somewhat beyond the purview of planners and public officials, the development of communities that help promote physical and social engagement for older adults is consistent with the community planning and public health goals outlined in this report.

The Aging Network

A valuable resource for planners is the large group of individuals and professionals making up what is loosely called the "aging network" or the "aging-services network" in their cities, communities, and regions. The aging network informally comprises a wide range of individuals, organizations, and professional disciplines, and its multiple focus areas are as broad as its constituency. The aging network currently encompasses 56 state agencies on aging, 618 area agencies on aging, nearly 20,000 service providers, and 244 tribal and native Hawaiian organizations representing 400 tribes (National Association of Agencies on Aging 2013).

The aging network focuses on issues of caregiving, older-adult justice, basic service provision, social justice and equity, socioemotional issues, and community engagement as well as issues of the built environment perhaps more familiar to planners, such as transportation and housing.

The Older Americans Act

Congress passed the Older Americans Act (OAA) in 1965 in response to policymakers' concerns about a lack of community social services for older adults. The original legislation established authority for grants to states for community planning and social services, research and development projects, and personnel training in the field of aging. The law also established the Administration on Aging (AoA) to oversee the newly created grant programs and to serve as the federal focal point for matters concerning older adults. Although individuals may receive services under many other federal programs, the OAA is the major vehicle for the organization and delivery of social and health-related services to older adults and their caregivers through the aging network.

Area Agencies on Aging

The OAA established Area Agencies on Aging in all states to respond to the needs of Americans age 60 and over in every local community. Although each agency provides services tailored to its region as defined in its required area plan on aging, typical resources provided to older adults include adult day care services, chore services, companion and respite care, congregate meals, ombudsman assistance, employment assistance, health care aides, home-delivered meals, home repairs, legal assistance, meal sites, senior centers, and transportation services (National Association of Agencies on Aging 2013).

Aging and Disability

In 2012 the U.S. Department of Health and Human Services created a new organization, the Administration for

Community Living (ACL), to help older adults and people with disabilities live at home and in communities with the support services they need. The ACL merged many of the functions previously provided separately by the AoA and the Administration on Intellectual and Developmental Disabilities (U.S. Department of Health and Human Services 2012).

The ACL has initiated the development of Aging and Disability Resource Centers (ADRCs) in every state that offer a "no wrong door system" and counseling to help connect individuals with public and private services. The ADRCs are also an important component of the aging network. Although not all members of the disability community are also older adults, this federal-level programmatic convergence between the aging and disability communities is an ongoing initiative that has significant implications for efforts to develop and operate aging-supportive communities—as the aging population will include increasing numbers of frail older adults and older adults with disabilities.

A growing number of stakeholders within the aging network and disability community are framing their concerns as issues of social justice and equity, and they are assessing the equity impacts of all public policies, programs, and capital and infrastructure investments (see Portland 2012). This represents an expansion of the historical discussion of equity and social justice that centered on race, ethnicity, and income.

PARADIGM SHIFTS AFFECTING AGING IN COMMUNITY

Originally a term used in scientific scholarship, *paradigm shifts* have become more broadly defined and applied as radical changes to a comprehensive model of understanding that provide a society with viewpoints and rules about understanding and resolving problems. Paradigm shifts are game-changing systematic revisions rather than incremental changes or enhancements.

The United States is in the midst of a set of paradigm shifts that fundamentally affect the nature of cities and communities, smaller towns, and rural areas and their abilities to support aging populations. For the first time in recent history, simultaneous paradigm shifts are taking place in the fields of aging; health care; transportation; housing; the public realm; and municipal planning, operations, and finance. These paradigm shifts, outlined in Table 1.1 (p. 17), form the backdrop against which planning for aging-supportive communities is being and will be carried out. The impacts of the paradigm shifts in these different fields will be described in following chapters. These changes provide a community-focused, individual user-oriented, and entrepreneurial environment in which creative planners and public officials can craft comprehensive, integrated strategies to successfully support aging in communities.

LINKS WITH OTHER PUBLICATIONS, PROGRAMS, AND PLANNING MOVEMENTS

This PAS Report is philosophically consistent with and builds on a number of American Planning Association (APA) publications and resources—not all of which explicitly address issues of aging in community but which do help lay the foundation for aging-supportive communities:

"On the Radar: Aging and Livable Communities," American Planning Association (2015). APA has identified aging as an emerging issue and has assembled on its website a bibliography and links to many key resources.

***Aging in Community Policy Guide,* American Planning Association (2014).** Developed by a national APA task force and ratified by the National Delegate Assembly at the 2014 National Planning Conference, this policy guide is APA's most recent and explicit declaration of support for aging in community to date. This guide was developed at the same time as this PAS Report, and they may be seen as companion pieces that share a philosophy and a set of principles.

***Investing in Place: Two Generations' View on the Future of Communities: Millennials, Boomers, and New Directions for Planning and Economic Development,* American Planning Association (2014)**. This APA report indicates that millennials (defined as individuals born between the early 1980s and the early 2000s) and members of the baby boom generation share two features: (1) they have similar sentiments about what they want from their communities, including intergenerational diversity, accessibility and walkability, access to amenities, and affordability, and (2) they share a focus on "economies of place," where locational decisions focus more on quality of life and social capital than on jobs or a healthy local economy.

***Policy Guide on Smart Growth,* American Planning Association (2012)**. This APA policy guide defines the following set of

core smart-growth principles, most of which could also serve to define aging-supportive communities that benefit all ages:

- Efficient use of land and infrastructure
- Creation and/or enhancement of economic value
- A greater mix of uses and housing choices
- Neighborhoods and communities focused around human-scale, mixed use centers
- A balanced, multimodal transportation system providing increased transportation choice
- Conservation and enhancement of environmental and cultural resources
- Preservation or creation of a sense of place
- Increased citizen participation in all aspects of the planning process and at every level of government
- Vibrant center city life
- Vital small towns and rural areas
- A multidisciplinary and inclusionary process to accomplish smart growth
- Planning processes and regulations at multiple levels that promote diversity and equity
- Regional view of community, economy, and ecological sustainability
- Recognition that institutions, governments, businesses, and individuals require a concept of cooperation to support smart growth
- Local, state, and federal policies and programs that support urban investment, compact development, and land conservation
- Well-defined community edges, such as agricultural greenbelts, wildlife corridors, or greenways permanently preserved as farmland or open space

***Comprehensive Planning for Public Health,* American Planning Association (2011)**. This APA survey looks at the integration of public health and planning. The findings show that only 27 percent of respondents reported that their jurisdictions' comprehensive plans explicitly address public health. In addition, only 3 percent of respondents reported that their jurisdictions' sustainability plans explicitly address public health. Of those plans with public health components, aging was the 10th most cited topic, with 34 percent of respondents indicating it was addressed in their plans.

***Multigenerational Planning: Using Smart Growth and Universal Design to Link the Needs of Children and the Aging Population,* American Planning Association (2011)**. This APA paper, a Family-Friendly Communities Briefing Paper, promotes a broad community-based approach to creating communities that work for individuals across the age spectrum. This approach includes older adults and involves them in planning and development decisions.

***Planning for an Aging Society,* American Planning Association (1994)**. This APA PAS Report focused on issues of aging in community provided many early insights into many of the same issues addressed in this report (Howe, Chapman, and Baggett 1994).

Critically reading APA-sponsored and other publications not having a specific aging-in-community focus through an aging-supportive lens can yield additional relevant insights into planning initiatives that can also promote aging in community. As this report demonstrates, many of the components of successful communities—such as safe and welcoming public spaces, easy access to desired amenities and services, and a range of housing types—are similar or identical to components of aging-supportive communities. These types of community amenities have been identified as critical components of any number of well-regarded planning movements or initiatives from the past several decades, including smart growth, healthy communities, complete streets, walkable communities, new urbanism, and sustainable communities. While all cities and communities should do their planning with some specific attention to the impacts on their growing older-adult populations, planners need to balance the needs of numerous stakeholders representing population cohorts across the age spectrum and look for solutions and innovations that benefit multiple stakeholder constituencies.

More than a few astute observers have suggested that cities and communities planning well for their children and older adults will have planned well for virtually all of their residents. This report, therefore, acknowledges parallels between the goals of aging-supportive communities and livable communities and promotes strategies and coalitions that further the agendas of either or both. This is in contrast to an "us-versus-them" discourse where stakeholders have often battled on the political and policy fronts over scarce resources.

Some stakeholders feel that certain components of aging-in-community efforts—such as the integration of different land uses and the development of accessible and walkable spaces—are more readily supported in communities with form-based codes emphasizing form and character, rather than traditional zoning focusing on land use (Ball 2012). Evidence does suggest, however, that aging-supportive communities are not dependent upon a particular type of zon-

TABLE 1.1. PARADIGM SHIFTS AFFECTING AGING IN COMMUNITY

Field	Older/Previous Paradigm	Newer/Emerging Paradigm
Aging	Older adults seen as liabilities to be addressed; older-adult services not integrated into larger planning initiatives; older-adult issues assumed to be largely health care related and to be addressed by health care system	Older adults increasingly seen as civic assets to be leveraged; rise in intergenerational initiatives; increasing conflation of older-adult and disability communities; older-adult concerns seen as whole-person lifestyle issues
Health Care	Model of medical care based on hospitals and institutions; reliance on emergency rooms; needy older adults sent to nursing homes	Whole person-social work model; home and community-based approaches; reduced reliance on emergency rooms and hospitals; use of new and remote technologies; increased role for community-based first responders and health care-community partnerships
Transportation	Automobile focus; emphasis on vehicular roadway efficiency and traffic flow; transit focus on fixed and heavy rail; accessibility goal of meeting ADA standards; reliance on passive user technologies; older-adult focus largely one of improving drivers and roadways	Focus on multimodality, complete streets, walkability, and active transportation; emphasis on accessibility rather than ADA compliance; transit focus on light rail, bus rapid transit, and flexible systems; goal of reducing vehicle-miles traveled; rise of community- and asset-based transportation networks; increased reliance on shared platforms and individually managed technologies
Housing	Primary reliance on federal funds for affordable or supportive housing; prevalence of mid- to high-density cities surrounded by low-density suburbs and rural areas; urban lower-income housing largely limited to segregated, high-density, vertical buildings; some vertical projects built for older adults; aging in place largely centered on single-family dwellings	Lessened reliance on federal funds for affordable or supportive housing; increased reliance on tax incentives; de-densification or re-densification of older central cities with increasing density in inner-ring suburbs; urban lower-income housing de-densified with less vertical housing and more distribution; increase in number of naturally occurring retirement communities; aging in community more community- and network-focused; rise in creative and nontraditional housing strategies
Public Realm	Accessible and walkable communities largely limited to sidewalks and paths; little focus on public realm and transit; hardscape infrastructure dominating natural processes	Increased development of accessible and walkable communities; rise of informal and "pop-up" public spaces; transit-oriented development; proliferation of municipal greening and environmental sustainability strategies
Municipal Planning/ Operation/Finance	Largely reliant on public financing	Increasingly reliant on public-private partnerships and creative financing

Source: Bradley H. Winick, AICP, LEED

ing code. In addition, desirable communities are desirable for good reasons, and many of these reasons are not applicable to just certain portions of the lifespan.

THE STRUCTURE OF THIS REPORT

Chapter 1 has established the context for some of the major issues and opportunities facing communities throughout the United States as they begin to address the inescapable realities of the significant and permanent aging of their populations. This report will now shift its focus to some of the major issues facing planners and public officials in their ongoing work to establish and maintain healthy, vibrant, and sustainable communities.

Chapter 2 examines the older-adult housing context and presents a series of key issues that communities may wish to incorporate into their particular aging-supportive housing plans and programs. Chapter 3 reviews many of the key transportation research findings relevant to supporting older adults as they age in community, examines their community-planning implications, and offers strategic recommendations

and conclusions. Chapter 4 presents the changing public realm and public services contexts and describes a series of key issues that communities may wish to incorporate into plans and programs. Chapter 5 introduces the range of existing aging-supportive programs, presents key lessons learned from existing programs throughout the country, and offers strategic recommendations for developing location-appropriate plans and programs. Chapter 6 offers a series of specific strategic recommendations for establishing aging-supportive community plans and programs.

This report focuses on a range of issues that are specifically relevant to community and city planners and public officials as they work to develop aging-supportive communities, but it cannot fully address all the myriad issues relevant to planning for an aging society. Such concerns include, but are not limited to, issues of science or medical technology; social policy and ethics; legal, financial planning, and taxation matters; and the socioemotional and caregiving needs of older adults. Appendix A provides additional resources addressing these other aging-related issues.

CHAPTER 2

HOUSING OPTIONS TO SUPPORT AGING IN COMMUNITY

Most Americans want to age where they already live. Nostalgic images of retirees moving from their current homes to "golden-years" residences to enjoy the later stages of their lives in warmer climates or exotic locations reflect an increasingly smaller number of older Americans. AARP has found that nearly 90 percent of respondents over age 45 feel strongly or somewhat strongly that they want to stay in their homes for as long as possible, with a similar percentage indicating a desire to remain in their communities (Keenan 2010). The survey was given to adults in this age range in order to capture individuals who, while not currently in retirement, were planning in advance about decisions they might make in their later years. Respondents typically mentioned maintaining proximity to friends, family, and cherished community institutions as strong reasons they wished to remain in their communities.

This was confirmed by the *65+ in the United States: 2010* report by the U.S. Census Bureau (West et al. 2014). The findings indicate that of the small number of older adult movers, the majority, 59 percent, moved within the same county, while another 20 percent moved to another county in the same state. Most of these moves are driven by the need to be closer to family or for health reasons. What is less clear is the degree to which these findings reflect the ability of individuals to remain in their current dwellings and the extent to which acceptable and affordable housing alternatives are available within their neighborhoods and communities. The key question is whether communities provide a range of appropriate, affordable, and well-located housing options that can meet the needs of older adults, allowing them to age in community, rather than relocating to distant, less appropriate, or potentially less affordable housing options, where successful aging may be much more difficult.

This report takes a community-centric (aging-in-community) rather than a dwelling-centric (aging-in-place) approach, and it emphasizes planning considerations and initiatives at the city or community level rather than at the level of an individual dwelling unit. This is not to suggest that specific older adults cannot healthily and successfully age within their current dwellings. Rather it suggests that no single solution works for all individuals, and planners and policy makers should focus on the establishment and support of a range of appropriate dwelling options in cities and communities. While this statement is true for all residents of all ages, it is particularly true for older adults who may be facing a range of evolving health care, transportation, financial, and other circumstances and needs.

OLDER-ADULT HOUSEHOLDS AND HOUSING

Understanding where and how older adults currently live is important in promoting more aging-supportive communities. Characteristics about the older-adult population and challenges and approaches to addressing housing help frame this context.

The vast majority of older adults live in traditional community housing, while very few older adults live in "older-adult housing." According to the 2010 Census, 96.4 percent of the population age 65 and over live in a range of different types of households in their communities and 3.6 percent reside in group quarters (U.S. Census Bureau 2013). Similarly, a 2007 survey by the Centers for Medicare and Medicaid Services indicates that only about 4 percent of older adults age 65 and over reside in long-term care facilities such as nursing homes, and another 2 percent live in community-based housing that provides at least one service (Federal Interagency Forum on Aging-Related Statistics 2008). However, a recent study shows over one-third of older adults will receive care in an institutional facility at some point in their later years for stays averaging one year (Joint Center for Housing Studies 2014).

Many of the communities in which older adults live are aging along with their residents. A "naturally occurring retirement community" (NORC) is a neighborhood or building complex that was not originally designed for older adults but now has a large percentage of older adult residents. While not initially created to help older adults age in community, NORCs have evolved naturally, and they provide a way for older adults to live independently. NORC supportive service programs (NORC-SSPs) are public-private partnerships between NORC buildings and residents, health and social service providers, government agencies, and philanthropic organizations; they provide a range of coordinated health care and social services and group activities onsite at the NORC.

A growing number and variety of older-adult housing typologies exists. The smaller number of older adults not living in the general community are living in several types of housing. *The MetLife Report on Aging in Place 2.0* (Metlife Mature Market Institute 2010) groups older-adult housing into two major categories. "Lifestyle housing" is designed for active older adults and includes single-family or multifamily housing with social or recreational amenities, such as clubhouses or other recreational facilities, but without any care or assistance services. "Service-enriched housing," also known as "assisted living," offers a defined set of services intended to meet residents' evolving needs, and these arrangements include cohousing, continued-care retirement communities, assisted-living communities, and skilled-care nursing homes. In recent years, a number of newer or hybrid housing types have emerged as well as the adjustment of some traditional housing types to meet the needs of to the growing older-adult population.

Older adults are more likely than others to own their own dwelling units. According to recent Census data, approximately 80 percent of older adults own their homes, compared to about 65 percent of households headed by individuals younger than 65 years old. These figures have remained steady for several decades. The percentage of older adult homeowners who still have mortgages on their homes has risen in recent years—in part due to the economic recession in the latter half of the past decade—but it remains about half the rate of younger homeowners (U.S. Census Bureau 2013). Approximately 20 percent of older adults rent, less than the 35 percent of renters found in younger households (Lipman, Lubell, and Salomon 2012).

Older adult homeowners and renters often live in different places. A majority of older adults—particularly homeowners—live in suburbs, smaller towns, or rural areas rather than in cities. While older adult renters are much more likely than homeowners to live in cities (40 percent versus 23 percent), more renters reside in the suburbs than in cities (Lipman, Lubell, and Salomon 2012).

Affordable housing, particularly rental housing, is a significant concern for older adults. The housing cost burden is defined as the proportion of household income that goes towards housing costs. Thirty percent of household income is often considered the standard for housing affordability. More than 30 percent is considered a cost burden, and 50 percent or more is considered a severe cost burden. One third of adults above age 50, nearly 20 million U.S. households, are cost burdened, and about half of the lowest-income adult households are severely cost burdened, with the cost burdens increasing with age (Joint Center for Housing Studies 2014; Lipman, Lubell, and Salomon 2012). This is the case for both owned and rented dwelling units, with the likelihood of older adults having paid down or paid off their mortgages offset by household costs consuming a large share of their often fixed or diminishing resources.

In part because older women live longer than older men, they are much more likely to live alone. Of all older adults living alone in 2010, 71.2 percent were women and 28.8 percent were men. Among individuals 65 years and older, 35.7 percent of women lived alone and 18.8 percent of men lived alone. Older men are more likely than older women to live with their spouses and other relatives: 70.8 percent of men age 65 and older lived with their spouses, compared to 45.7 percent of women (West et al. 2014).

Older adults living alone often have less support and fewer financial resources. As the number of older adults continues to rise, the number living alone will also rise, and this will contribute to the challenges cities and communities face to support these individuals and help them successfully age in community (Lipman, Lubell, and Salomon 2012).

Lesbian, gay, bisexual, and transgender (LGBT) older adults face many specific aging issues. Recognizing that LGBT older adults often face particular health care, financial, and legal issues, the U.S. Department of Health and Human Services in 2010 awarded a grant to Services & Advocacy for Gay, Lesbian, Bisexual & Transgender Elders and a number of national partners to establish the National Resource Center on LGBT Aging.

A high number of older adults live in dwellings that are not safe or adequate for their physical needs. While only a small fraction of older adults currently live in dwellings considered "inadequate" as defined by the American Housing Survey, many other dwellings may not be safe or suitable

for older occupants, particularly for those older adults with mobility challenges (U.S. Census Bureau 2013).

The Great Recession and Older Householders

The recent recession eroded the net worth of households of all ages. While the recession's specific impacts on older adults are still being analyzed and evaluated, the percentage of older adult homeowners who still have a mortgage on their homes has risen in recent years, in part due to the recession. It is unclear the extent to which this will influence their future housing choices. Since older adults are more likely than younger homeowners to have paid down or paid off their mortgages, their overall net worth may have been less affected (Joint Center for Housing Studies 2014; West et al. 2014). However, older adult homeowners owe more on their homes than in previous years (Harrell 2011).

One observed outcome, due to the decline in housing values, is the phenomenon of increasing numbers of older adult homeowners being "stuck in place." While this impact may have lessened in the past few years in many areas, local regions and communities may still be seeing its effects in depressed resale values, which may then hinder the ability of older adult homeowners to transition into more supportive forms of housing, such as independent or assisted living facilities (Valley 2011). The effects of the recession on older adult renters are most likely on their overall financial situations and net worth rather than their living situations, although this underscores the need for affordable housing options for more financially vulnerable older adults (Joint Center for Housing Studies 2014; West et al. 2014).

"Over-Housed" Older Adults

The concept of individuals being "over-housed" initially referred to subsidized housing situations where households lived in dwelling units larger than the ones for which they qualified. For most older adults living in public housing, over-housing is a result of changing family circumstances, primarily the departure or death of spouses or children, which leave a sizable number of older-adult women in over-housed situations. Changing federal regulations and financial pressures on state and local public housing authorities have given rise to increased efforts to remove some over-housed older adults, leading to controversies and resistance in several communities where over-housed individuals are portrayed as contributing to the under-housing or overcrowding of younger and larger household units (Harris 2012).

The concept of over-housing has been broadened to describe a range of private housing situations in which individuals live in housing units larger or more complicated than ones for which they would be more appropriately suited. For older adults, this generally results from spouses, children, or housemates leaving households or from changing physical or mobility circumstances. In both the public and private housing markets, the existence of over-housed older adults living in inappropriate or undesirable housing units can be linked to the shortage of affordable and well-suited housing alternatives within their communities.

Technological Innovations

In response to the aging of the U.S. population, thousands of startup and established businesses and entrepreneurs are developing new technologies and technological applications that will meet the needs and interests of older adults. These innovations address transportation, health care, disease management, financial strategies, telecommunications, social engagement, commerce, and other aspects of daily living. While many of these innovations focus on individual older adults, these technological innovations have wide and varied applicability and offer potential benefits that could help support successful aging-in-community efforts. Examples include surface materials and technologies to help limit falls, motion detection and other sensing technologies to support individuals living alone, driverless vehicles, and telemedicine and other remote health care applications.

Community Engagement

Access to a community's social, cultural, economic, educational, and recreational assets is considered a critical ingredient of an older adult's ability to successfully and healthily age in community. The inability to easily access these community assets is linked to a variety of emotional and physical maladies in older adults. There are both programmatic and physical approaches to provide opportunities for older-adult community engagement. Communities and their key community-based institutions, organizations, and agencies can collaborate to provide a range of accessible and affordable programs and services to encourage public participation in the planning process, including transportation, financial assistance, sign language interpreters and captioning at public meetings, and accessible and readable public review documents.

In terms of the physical environment, communities can work toward community accessibility through walkability, varied mobility options, and a reduction in automobile dependency. Additionally, key community assets can be spa-

tially arranged to promote a mixture of accessible land uses and older-adult housing proximal to key community assets and services, which in turn offers numerous community health benefits.

Green Building and Healthy Housing

In recent years, much attention has been focused on the development of healthier, more environmentally sustainable buildings and communities. One aspect of this work is the quantification of potential environmental and public health benefits to occupants or residents. A number of initiatives are focused on the potential benefits of healthier homes for older adults, including older adults with mobility challenges or chronic diseases (Green House Project 2015; New York State Office for the Aging 2015).

A concept related to the idea of healthy housing is "environmental press," which suggests that there is a level of environmental fit between individuals and their environments, and the effects of the environment increase as individuals' independent functional abilities diminish. Good fit allows an individual independence, whereas poor fit can lead to functional decline (Lawton 1977). Therefore, housing that leads to the best environmental fit can also provide the most supportive housing options.

NIMBY Opposition

The "not in my backyard" (NIMBY) phenomenon—referring to resident opposition to development proposals perceived to have disproportionately negative impacts to the immediate area—is well known in many cities and communities. In some instances, NIMBY opponents to a project believe that such projects are needed by society but that they should be located elsewhere—typically some distance away.

NIMBY opposition often includes arguments about heightened traffic volumes or parking congestion; decreased property values; increased environmental, water, air, noise, or light pollution; degradation of a neighborhood's feel or design character; changes to a neighborhood's population base; or perceived increases in crime or safety concerns. This opposition can be in response to various types of development proposals, including housing, infrastructure, institutional and commercial projects. A growing number of cities and communities around the country are now seeing NIMBY opposition to older-adult housing development proposals, with opponents citing the typical noise, traffic, and character compatibility issues. In some instances, a projected increase in emergency vehicle traffic has also been cited as reason to oppose these developments.

Cities and communities can specifically attempt to head off or respond to NIMBY opposition through programmatic measures, such as promoting older-adult housing as a policy priority; modifying zoning, housing, and other codes and ordinances to provide greater siting and development flexibility; and establishing zoning districts that permit older-adult housing. City and community leaders, along with community and faith-based stakeholders, can also employ broader community-building strategies, such as providing leadership for broad-based collaborative initiatives to educate community members about the need for and actual impacts of older-adult housing and advocating for the inclusion of appropriate housing options for older adults in all neighborhoods. In addition, a growing number of aging network practitioners have adopted an "age-in-all-policies" approach. This inclusive public spirit may be applicable to community conversations about appropriate and aging-supportive locations for older-adult housing.

Safety Concerns

The perception of the lack of safety within a neighborhood or community is frequently mentioned by older adults as an impediment to them to leave their dwellings and engage with the community, which then further contributes to their isolation. Whether safety concerns are based in reality or can be verified is less significant as these perceptions ultimately dictate behavior. Safety concerns can include the fear of being a crime victim, concern about falling down on steep or precarious sidewalks or walkways, apprehension about extreme weather conditions, and worry about vulnerability in vehicular traffic.

Planners have little specific ability to reduce actual incidents of crime, although "eyes on the streets" strategies and other defensible design approaches can help to some degree. Planners can make more of an impact with respect to sidewalk or traffic concerns through sensitivity to older-adult issues in their capital improvement planning. Similarly, though planners have no control over factors such weather and topography, planning with a sensitivity to how such factors disproportionately affect older adults can help address these concerns in a more integrated manner. Strategies can include providing more heating and cooling centers and shaded refuges and working in community-based coalitions with other public, public health, health care, nonprofit, and faith-based organizations.

PLANNING FOR OLDER ADULTS AND HOUSING

Cities and communities throughout the country have developed a range of creative and effective programs to address the

challenges in providing and encouraging a range of appropriate and affordable housing options for older adults. These promising practices help provide a foundation for developing an even broader array of aging-supportive cities and communities throughout the United States.

Older-Adult Community Housing Assessments

Some cities and communities have taken the proactive step of commissioning assessments of current and projected levels of older-adult housing supply and demand in their communities, in order to help determine the degree to which they will be able to meet future demand. These assessments, which are currently done in some states and communities as standalone special assessments or as part of more comprehensive community housing assessments, also typically point to strategies that communities can use to help address projected shortages of specific older-adult housing types.

Senior Housing Needs Assessment for the Northwest Suburban Housing Collaborative

The Metropolitan Mayors Caucus commissioned an assessment of the housing needs for older individuals within five northwest suburbs of Chicago. A series of interviews and focus groups provided information for a market-based assessment that evaluated a number of housing types for a range of income levels and price points in the communities individually and collectively, identified specific unmet needs and gaps, and presented a set of recommendations and implementation considerations to help better prepare these communities to support aging in community in the future (Metropolitan Mayors Caucus 2013).

The senior housing needs assessment included the following:

- Instances of oversupply of certain types of older-adult housing in individual communities (while noting that the new housing may in fact serve multiple communities)
- Specific housing gaps for some market-rate and affordable independent living and affordable assisted-living housing
- An unmet need for independent living for moderate-income older adults who may not qualify for affordable housing but also may not be able to afford market-rate units in the study communities
- Home maintenance and modification assistance programs
- A review of existing zoning codes and other municipal ordinances to allow for a range of appropriate older-adult-supportive housing types
- A call for more coordinated transportation services, particularly services that allow for the crossing of jurisdictional boundaries
- Better linkages to a range of housing support and other human services

Older-Adult Housing Plans

While many cities and communities at least touch upon the needs of older adults as part of their comprehensive, general, or master plans, not many of these plans address these needs in greater detail. Several communities, however, have developed freestanding older-adult housing plans to specifically address where older adults will live in their communities in the future.

Senior Housing Master Plan, Howard County, Maryland

Howard County, located between Washington, D.C., and Baltimore, created a comprehensive senior housing plan as an outgrowth of the general plan in order to support existing communities through home maintenance, renovation, and modification; provide appropriate housing designed with older adults in mind; and encourage an affordable and diverse range of housing types.

The *Howard County Senior Housing Master Plan* (Howard County 2004) included a series of recommendations:

- Expand the use of universal design to include required use in new construction and recommended use in modifications or renovations to existing housing units.
- Modify the zoning and building ordinances to allow wider use of accessory dwelling units.
- Change zoning regulations to foster better design and greater compatibility by setting additional landscaping requirements and limiting the total building area per acre and building size.
- Modify zoning regulations to allow multiplex construction and to permit smaller older-adult housing developments to have 20 units minimum instead of the current 50.
- Establish a design review panel to review projects for neighborhood and design compatibility.
- Modify ordinances to increase the number of affordable dwelling units through the construction of a greater number of moderate-income housing units.
- Create a housing trust fund to finance construction or modification of affordable dwelling units.

Howard County continues to monitor and modify the recommendations of the plan as needed in order to better meet its goals. In 2014 the county announced a new "Master

Plan for the Aging Population initiative," a comprehensive planning process to design services, programs, and facilities to address the future needs of this growing segment of the county's population (Howard County 2015).

Human Services and Health Care Services Links

Health care provision will increasingly rely on community- and home-based care rather than institutionalized care, as codified by the Affordable Care Act and other federal and state legislation and policies. This paradigm shift, in conjunction with the financial pressures the health care industry faces, will likely give rise to new community-based housing models that better link human services and health care with residents. Planners should be aware of such developments because planning can play an important role in supporting these efforts by eliminating zoning codes, building codes, and other local regulatory or institutional barriers. Some types of housing for older adults already focus on improving linkages between residents' housing, human service, and health care needs, based in part on goals to reduce transportation needs, automobile reliance, and dependency on institutional care.

The Green House Project

Green Houses are self-contained homes for 10 to 12 residents located in clusters of one to two dozen homes and designed to be similar to homes in communities or in apartment buildings. Green House home clusters are typically licensed as skilled nursing homes and meet all applicable federal and state regulatory requirements. Founded in 2003, the Green House Project now includes over 100 Green Houses in 32 states.

Each resident has a private bedroom and bathroom opening to a central living area, open kitchen, and dining room where communal meals are held. Green Houses are staffed by a team of support workers, shared nurses, and comprehensive clinical workers. Limited evaluations comparing Green House residents and nursing home residents have indicated that Green House residents experience improved quality of life and satisfaction with their care, more direct-care time, increased engagement levels, and lower hospitalization rates, leading to reduced health care costs (Robert Wood Johnson Foundation 2015).

Support and Services at Home Program, Vermont

States, regions, and communities have developed a number of programs designed to better link home-based older adults with community-based support services. One of the more promising examples is Vermont's Support and Services at Home (SASH) program. SASH is component of Vermont's Blueprint for Health public-private initiative and was initiated by Cathedral Square Corporation, a nonprofit developer and operator of 24 affordable housing communities. SASH uses a community-based care coordination model to link housing, health care, and social services for approximately 4,000 participants in over 100 housing sites. A preliminary analysis of SASH's performance over three years has found cost savings due to a reduction in Medicare expenditures, hospitalizations, and participant injuries as well as improved care and quality of life from a reduction in service gaps and duplication and from the ability of participants to remain in their familiar settings (U.S. Department of Health & Human Services 2014).

Naturally Occurring Retirement Communities

As described earlier, naturally occurring retirement communities (NORCs) and NORC supportive service programs (NORC-SSPs) are a phenomenon where aging communities evolve over time in places not initially intended for aging in community. As the population continues to age, a number of municipalities have begun to recognize that NORCs exist in their communities, and they are addressing how to incorporate NORCs and NORC-SSPs into local aging-in-community initiatives.

Penn South Program for Seniors, New York City

The first NORC-SSP was established in 1986 at the Penn South Houses in New York City. The Penn South NORC-SSP and other NORC-SSPs in the city appear to have successfully come together with service delivery organizations to operate new types of older-adult service programs organized around the older adults and their communities.

Indications are that most residents are actively engaged in the NORC communities; those who are capable of extensive activities have a broader range of choices available, many of which permit them to make contributions to their communities. Residents who experience acute or intermittent crises have nearby familiar and trusted sources of professional assistance, and those with progressing disabilities have neighbors and supporters to assist them as they navigate the formal service system. In many instances, they can also draw on additional services that might not otherwise be available and that can help make major positive differences in their lives.

The results of a broad national evaluation of NORCs suggest that NORC-SSPs are an effective way to promote the health and well-being of older adults and their ability to successfully age in place (Bedney and Goldberg 2009).

Affordable Housing

Many older adults are living longer lives on limited fixed incomes, and they struggle to meet their housing costs. Housing cost burdens increase with age, posing the greatest challenge for the 85-years-and-over cohort, those who are also the most likely to require the highest level of supportive services. Additionally, many affordable housing projects developed in past decades are at risk due to expiring subsidies or deteriorating buildings. Therefore, maintaining current affordable housing and meeting the future demand for affordable housing are important issues related to aging populations. While federal housing subsidy programs can play a role in the development and provision of affordable housing for older adults, the current and predicted levels of funding from these programs will likely meet only a fraction of the need.

Most states, regions, cities, and communities are financially challenged as well and are unlikely to provide funding to fully address the affordable housing demands of older adults. Over the past two decades, the federal Low-Income Housing Tax Credit (LIHTC) program has provided much of the resources for the preservation of affordable housing. Funds are distributed according to state allocation plans, and many state plans have used the funds to preserve existing at-risk affordable housing or to develop transportation-accessible affordable housing.

Cities and communities may be able to facilitate affordable housing efforts through programs offering features to help individuals and affordable housing developers, such as the following:

- Property tax relief for qualified older adults
- Property cost write-downs, tax abatements, or other incentives for affordable developments
- The elimination of zoning codes, building codes, and other administrative barriers to affordable housing
- The development and maintenance of databases to track at-risk affordable housing in the community
- Collaborations with national, state, regional, and community private and nonprofit entities to develop public-private-nonprofit affordable housing funds
- Inclusionary housing ordinances that would require new housing developments to provide affordable units or make payments into a community-wide affordable housing fund
- The prioritization or incentivizing of potential new older-adult housing development sites with adequate linkages to transportation and other community services
- Better connections between older adult residents and social and medical services
- More efficient linkages between human-services transportation planning and aging-supportive community planning
- The creative application of other federal and nonfederal funds to promote aging-in-community efforts

A number of states, municipalities, and communities around the country have started to address the issue of affordable housing, specifically the issue of affordable housing for older adults.

Olene Walker Housing Loan Fund, Utah

The State of Utah works to support affordable housing in a number of ways. It prioritizes LIHTC resources for affordable housing preservation projects and has established a statewide housing trust fund, the Olene Walker Housing Loan Fund. This fund has provided resources for the preservation of affordable housing throughout the state through several programs. The Community-Driven Housing Program encourages cities and counties to proactively address affordable housing needs by using funding set aside exclusively for community-initiated projects that fulfill goals established in the communities' affordable housing plans.

The Multi-Family Program provides financial assistance for the acquisition, construction, or rehabilitation of affordable rental housing of five or more units. The Single Family Rehabilitation & Reconstructions Program targets rural communities and offers financial assistance to low-income homeowners whose homes are in need of rehabilitation or replacement. The Owner-Occupied Development Program, also known as the Rural Self-Help Program, provides financial assistance to public agencies for development of single-family subdivisions and infill projects designed to provide housing to low-income individuals and families in rural Utah. The Home Choice program is designed to provide financial assistance and mortgage assistance to low-income persons with disabilities.

Zoning Ordinance, Town of Stratham, New Hampshire

Over the past two decades, this small outer suburb in the Boston metropolitan area with a population of approximately 7,500 has experienced dramatic population growth and sharply escalating property values. The resulting increase in the property tax burden has challenged older adults who want to remain in their own homes or find alternative affordable housing in the community.

Stratham has proactively addressed the issue of aging in community by making a series of modifications to its zon-

ing ordinance to create an "affordable senior housing" zoning district overlay, make "elderly affordable housing" an identified and allowable multiple household use, and eliminate minimum lot sizes to support both accessory apartments and "retirement planned community" uses that allow older adult homeowners to downsize their residences rather than leave the community due to the lack of affordability (Town of Stratham 2014). The affordable senior housing designation also requires developers to provide legal assurances for continuing affordability into the future. Although this overlay designation is limited to certain areas in the town, efforts have been underway to broaden the option to most areas in Stratham.

Housing Assistance Programs

A number of municipalities and communities have established and operated housing assistance programs that typically offer a range of programs, often including one or more programs specifically targeted toward meeting the housing needs of older adults.

The Housing Assistance Program of Essex County, New York

This county of about 40,000 in upstate New York has offered various housing programs for over three decades through the Housing Assistance Program of Essex County: housing rehabilitation programs that have provided funding and assistance for over 1,100 affordable dwelling units since 1984, including housing for low-income and older adult owners; a multifamily housing fund that has helped communities finance and develop projects, a number of which have been for older adults; and extensive housing counseling and assistance services.

The Shared Housing Center, Dallas

Through collaboration between the Texas Department on Aging, Access Center for the Elderly, the Dallas Area Agency on Aging, and Catholic Charities of Dallas, the Shared Housing Center was founded in 1984 to provide affordable housing options. This Dallas countywide program facilitates arrangements between individuals who have more housing than they need and people or families in need of housing. Typically the homeowners are over-housed women who have outlived their spouses. They are house-rich and money-poor individuals, struggling to pay utilities, home maintenance costs, and taxes. They seek roommates who can contribute to the finances and to their lives by offering companionship, assistance with household chores, and a sense of security.

The people and families seeking housing come from all walks of life. They are older widows or single women, students, second career seekers, recently divorced persons, low-income families, unemployed people, homeless individuals and families, and women fleeing domestic violence situations. Other collaborations between nonprofit agencies, faith-based organizations, and area agencies on aging in cities and communities around the country operate a range of different single-family and apartment home-sharing programs, including a number of programs specifically designed for and focused on pairing up older adult women.

Subsidized Older-Adult Public Housing

With approximately 31 percent of the more than one million subsidized public housing units in the U.S. dedicated to older adults, public housing authorities and managers are important partners in the creation and operation of aging-supportive communities. A growing number of public housing authorities across the country have developed creative strategies to support their residents as they have aged and their needs have evolved. These strategies include performing health and functional needs assessments of older-adult residents, working with a broad range of health-care and social-service providers to develop enhanced menus of onsite support services, and developing mechanisms for enhanced resident engagement and empowerment within the community. While significant financial, legal, communication, and operational challenges still exist, communities need to include older-adult public housing managers and residents in their efforts to develop truly aging-supportive communities.

South Lincoln Redevelopment, Denver

Denver is redeveloping the 15-acre South Lincoln site, currently home to more than 200 distressed public housing units from the 1950s. When the project is completed in 2018, Mariposa (formerly the South Lincoln Homes) will include up to 900 new public housing and market-rate units. The rejuvenated, mixed income neighborhood will be walkable, transit-oriented, health-oriented, and green. Key to the redevelopment of South Lincoln is its proximity to a light-rail stop. The community redevelopment plan includes numerous accessibility and environmental sustainability features. To encourage cycling, for example, a substantial biking infrastructure is being built that includes paths, racks, and housing units with bike storage.

The Tapiz building, part of the Mariposa project, was completed in 2012 and contains 100 subsidized units designed for older adults and disabled individuals (Figure 2.1). It is located on the site of an old brownfield and hosts a number of

community job training programs, youth activities, and art classes. An onsite community "health navigator" works one on one with residents to help them get healthy.

Accessibility, Visitability, and Universal Design

The terms *accessibility*, *visitability*, and *universal design* describe housing and other elements of the built environment that are intentionally designed so as to be inclusive regardless of individuals' physical limitations. These terms are often used interchangeably, although many stakeholders and advocates make specific differentiations between them, and they can be placed on a continuum of intent. Accessibility is often mandated by codes, guidelines, and regulations as part of a civil rights law or building code, with the federal Americans with Disabilities Act of 1990 (ADA) providing the broadest mandate. The ADA defines a disability as "a physical or mental impairment that substantially limits one or more major life activities" (42 U.S.C. § 126.12102). Accessibility features typically address elements such as doorway and hallway widths, ramp slopes, wheelchair turning radiuses, and electrical outlet and hardware heights and placements.

Visitability was originally an idea that encouraged design practices to provide basic access features and increase inclusiveness for people with disabilities, rather than offering completely accessible dwelling units. The concept has evolved into a movement to change housing construction standards so that nearly all new homes—whether designated for residents with current mobility impairments or not—offer specific accessibility features. With little federal involvement, some states and communities have codified visitability at the local level. Visitability features typically include step-free entrances, wider doorway widths, and bathrooms on the first floor of dwellings.

Universal design was broadly conceived by the late Ronald L. Mace as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Center for Universal Design 2015). Universal design principles strive for equitable, flexible, easy, and intuitive use with a non-institutional design aesthetic. Similar to visitability, universal design is included in some state and community codes and ordinances. Universal design goes beyond building envelope features to address the design of products,

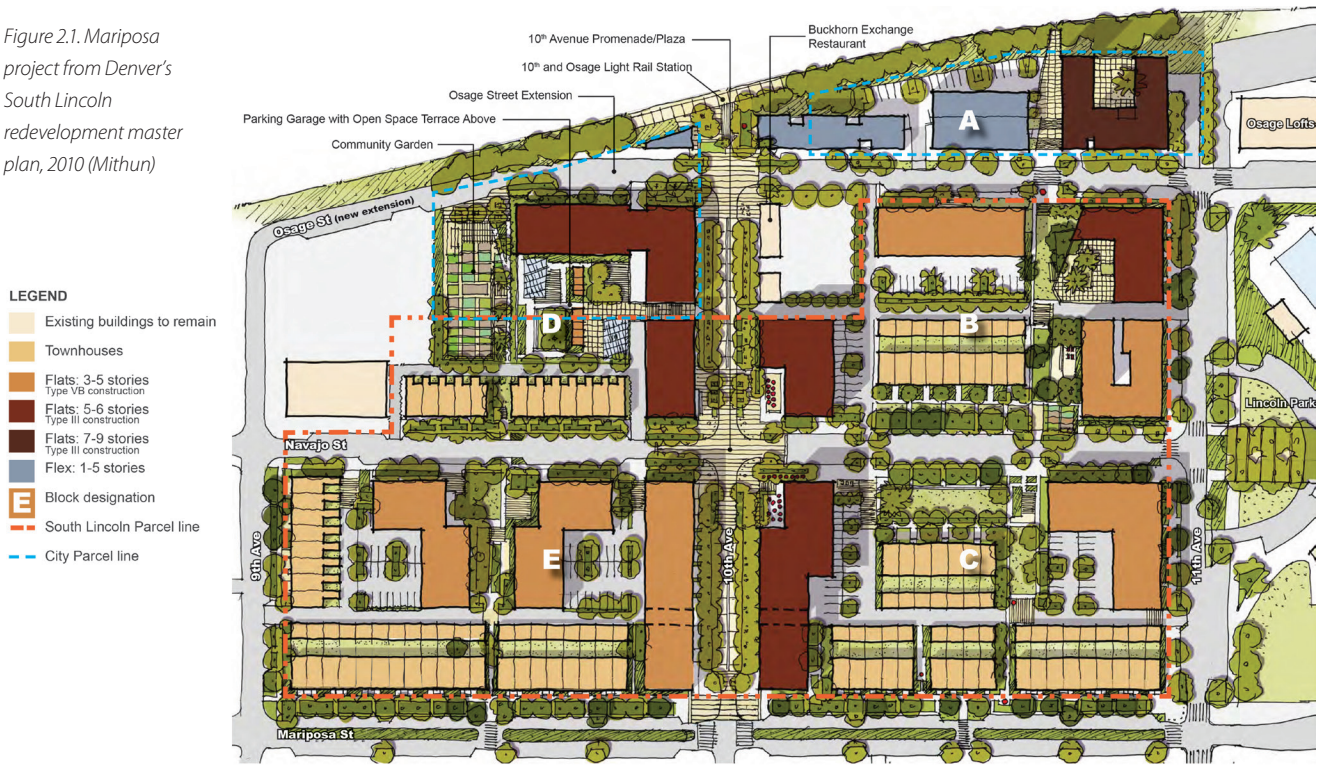

Figure 2.1. Mariposa project from Denver's South Lincoln redevelopment master plan, 2010 (Mithun)

hardware, appliances, and communication and household devices (Story 1998).

The following are the seven principles of universal design (Preiser 2007):

1. **Equitable use:** Giving all users equal access to the built and urban environments.
2. **Flexibility in use:** Providing design that offers a range of choices and accommodates different abilities and preferences.
3. **Simple and intuitive use:** Making objects and spaces usable and navigable through simple and understandable guidance or markers.
4. **Perceptible information:** Communicating information that is understandable to a range of sensory abilities and in a range of ambient conditions.
5. **Tolerance for error:** Designing to minimize hazards through accidental or unintended actions.
6. **Low physical effort:** Developing designs that can be used efficiently and comfortably and that cause a minimum amount of fatigue.
7. **Size and shape for approach and use:** Allowing for use by users with different spatial and physical needs.

Several states have passed legislation requiring visitability features to be built into all publicly subsidized housing, and in a few cases, all future housing. In addition, several dozen cities and counties have implemented visitability ordinances. Visitability and housing advocates around the country are addressing challenges to enacting visitability raised by incompatibilities between certain statewide building codes and local zoning ordinances.

Visitability Ordinance, Bollingbrook, Illinois

The Chicago suburb of Bolingbrook passed one of the country's most extensive visitability ordinances in 2003 that required all new homes built within the village after January 2004 to comply with a strict set of visitability principles that includes the following items:

- A zero-step entrance into the home
- A bathroom on the same level as the zero-step entrance
- A bathroom wall reinforced for grab bars
- Exterior and interior doors that are 32 inches wide
- Hallways that are at least 42 inches wide and passageways that are at least 36 inches wide
- Electrical wall outlets and receptacles located 15 inches above the finished floor

Figure 2.2. Visitable house in Bolingbrook, Illinois (Concrete Change)

- Light fixtures and fan wall control switches located a maximum of 48 inches above the finished floor

Initial challenges from home builders and individual homeowners over potential increased construction costs or difficulty of resale have been mitigated as new homes with the required visitability features have sold easily, with minimal additional costs (Claar and Boan 2005). Since the ordinance's passage, there have been over 5,000 homes built under the required visitability criteria, and the Bolingbrook ordinance has served as an example for communities around the country considering visitability ordinances (Figure 2.2).

Flexible Older-Adult Housing Options

Cities and communities around the country are seeing a broadened range of less traditional and more flexible housing options that are specifically targeted to older adults, including accessory dwelling units (ADUs), smaller homes and clustered "pocket neighborhoods," multigenerational or intergenerational housing, shared housing, older-adult congregate housing or cohousing, and the adaptive reuse of a variety of community structures into older-adult housing. Many of these options are not new, but they have been refocused for the roles they can play in meeting the evolving needs of the burgeoning older-adult population. In addition, in some communities, older-adult housing is included in various locations across a community rather than just being located in a few, often fringe, zones.

Accessory Dwelling Units, Portland, Oregon, and Vancover, British Columbia

An ADU is a second small dwelling on the same parcel as a single-family home or attached to a larger house. ADUs can take several forms, including an apartment over the garage, a small separate house on a separate foundation in the primary home's backyard, or a basement apartment (Figure 2.3). These dwellings can be used in a number of ways to support the ability of older adults to age in community. An older homeowner who may not need a full-sized house or may not want to maintain it—but who wants to keep a relationship with the neighborhood—could sell the home, possibly to a child or other relative, and relocate to a smaller onsite ADU. In another situation, a cost-burdened older adult homeowner could supplement her income by renting out an ADU. An older adult homeowner could also swap the use of an ADU for the tenant's assistance with home maintenance or other daily activities, including basic health care ones.

There has been resistance to ADUs in many cities and communities for social, economic, or neighborhood-preservation reasons, and these places maintain zoning and building code barriers—most often requirements around parking, minimum building or lot size, owner-occupancy requirements, or design standards—that either by intent or by practice prohibit ADUs. Interest in ADUs around the country is growing for a combination of financial, demographic, and locational reasons. A recent survey identified over 50 cities and communities on the West Coast that have modified their zoning and building ordinances to allow the development and operation of ADUs (Oregon Department of Environmental Quality 2013). AccessoryDwellings.org, based in Portland, Oregon, is a website with more information on ADU design and research (http://accessorydwellings.org).

Portland is one of the U.S. cities most supportive of ADUs. In 2010, the city instituted a waiver of development charges that, along with no owner-occupancy or parking requirements and generous lot-size allowances, has supported significant growth of ADUs in recent years (Figure 2.4). The City of Portland Zoning Code provides standards for accessory dwelling units in all residential zones (33 § 33.205). ADUs can be designed as part of a house (detached single-family dwelling), an attached house, or a manufactured home in the following ways:

- Converting existing living area
- Finishing an existing basement or attic
- Building a new structure
- Making an addition to an existing structure

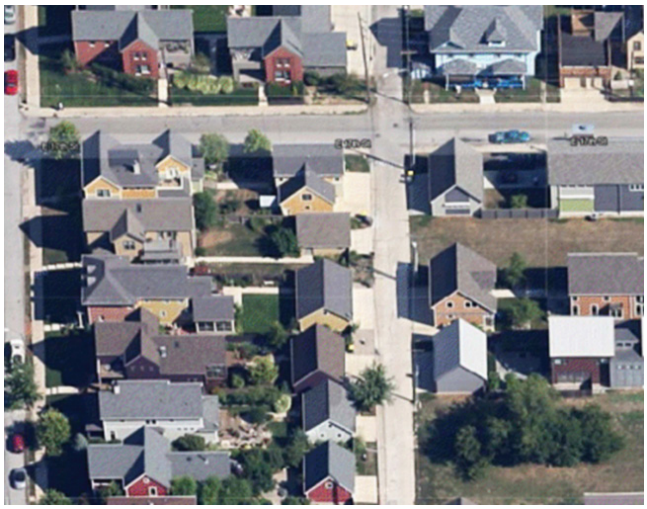

Figure 2.3. Accessory dwelling units in Raleigh, North Carolina (RaleighAccessoryDwellings.com)

Figure 2.4. A 720-square-foot accessory dwelling unit in northeast Portland, Oregon, developed as a rental unit (Polyphon Architecture & Design, LLC)

In all instances, ADUs in Portland are required to be stylistically compatible with their host neighborhoods. Proposals for new ADUs must meet a variety of design and use standards, and in some cases they must undergo a public design review process.

In Canada, some municipal codes go even further in supporting ADUs. In Vancouver, British Columbia, for example, codes allow a single-family property to have both one small attached ADU and one small detached ADU. Vancouver also has relaxed ADU parking requirements,

owner-occupancy requirements, and unit design codes, such as ceiling heights and sprinker systems requirements, in addition to permitting full basements to allow for basement suites (Vancouver 2015).

Small Homes and "Pocket Neighborhoods," White Salmon, Washington

In the search for an expanded range of housing options for older adults, architects and developers are creating new flexible variations on the concept of clustered developments and smaller homes. "Pocket neighborhoods," also called "cottage housing," is one approach, with small homes clustered around landscaped common areas on smaller or less easily developable parcels in existing residential neighborhoods (Chapin 2011).

The Wyer's End neighborhood in White Salmon, Washington, was developed in 2008 by Smart Development Corporation and designed by architect Ross Chapin. It contains 18 cottages each averaging 1,100 square feet, with an additional 10 live-work dwellings planned for a second phase. The development of pocket neighborhoods typically requires a number of local zoning and building code variances, modifications, or special use permits, as they often do not meet requirements for minimum lot or building size, floor area ratios, and setbacks. Some proposed pocket neighborhood developments have also faced local NIMBY opposition.

Multigenerational and Intergenerational Housing

Recent data have indicated that multigenerational housing is more common among some racial and ethnic groups—including Hispanics, African Americans, and Asian Americans—where substantially higher percentages of the population live in multigenerational households as compared to non-Hispanic white households. For-profit housing developers are creating new dwelling types to address the growing older-adult population and, in particular, those extended families with older adults.

For example, national commercial builder Lennar has developed the "Next Gen" home, with the tag line "Two homes. Under one roof." These homes include two dwellings: the main house and a separate suite with its own entrance, living room, kitchenette, one-car garage, laundry, and private outdoor living space, and optional direct access from the main house depending upon the family's needs (Figure 2.5).

Next Gen homes are intended to be permitted and built alongside more traditional single-family, market-rate homes. Next Gen and other similar housing models can be thought of as "stealth ADUs" attempting to make multigenerational

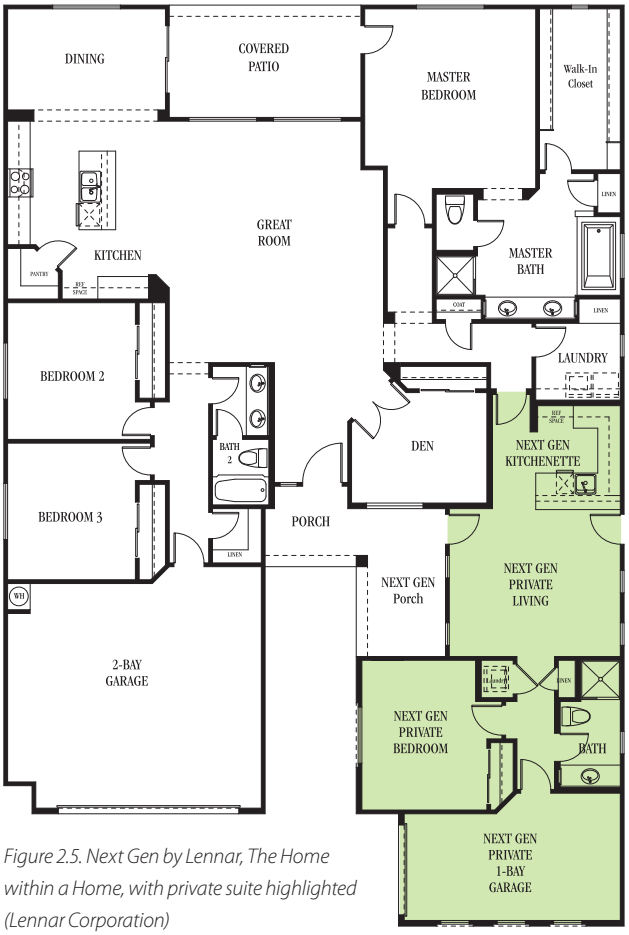

Figure 2.5. Next Gen by Lennar, The Home within a Home, with private suite highlighted (Lennar Corporation)

Figure 2.6. Site plan of Roseland Senior Campus (Courtesy of Landon Bone Baker Architects and Mercy Housing Lakefront)

housing mainstream and marketable, while avoiding the stigmas of ADUs.

Several community-based nonprofit agencies around the country have also adopted multigenerational housing solutions to address broader community needs. One example is Mercy Housing Lakefront's 10-unit Roseland Village Grand Family Apartments and the Roseland Place Senior Apartments, a 60-unit affordable assisted living facility located on the south side of Chicago and part of the 3.5-acre Roseland Senior Campus (Figure 2.6).

Adaptive Reuse, Kansas City, Missouri, and Silver Spring, Maryland

The Kansas City Public Schools, through its Repurposing Initiative, is taking an innovative and comprehensive approach to promote the reuse and redevelopment of 30 of its closed school sites, with community-based housing for older adults as one strong possibility. The former Seven Oaks Elementary School, vacant since 1997, is preparing to reopen as affordable housing for older adults. The new Seven Oaks Estates will consist of 28 two-bedroom units and 16 one-bedroom units, and it will also have meeting space available for the community (Figure 2.7).

While the adaptive reuse of shuttered schools—many of which are outdated, compromised, or environmentally contaminated buildings—is a complicated and expensive process, the community-centered locations of these buildings, typical adjacency to open space, and convenience to transportation and other neighborhood amenities make them worthy of consideration for older-adult housing.

Another example of adaptive reuse involves commercial property. Cohousing is described as is a type of intentional, collaborative housing in which residents actively participate in the design and operation of their neighborhoods. Eastern Village Cohousing in Silver Spring, Maryland, is a unique cohousing development that is the result of adaptive reuse of an abandoned 40-year-old four-story office building in downtown Silver Spring, on the border of Washington, D.C., and adjacent to a downtown transit hub. Completed in 2005, it includes 56 residential condominium units that range from one-bedroom flats to three-bedroom lofts, and it has a wide range of community, accessibility, and environmental sustainability features. While Eastern Village Cohousing was not specifically developed as housing for older adults, it contains many aging-supportive features that would translate quite well to the newer cohousing model called "elder cohousing," specifically designed for older adults (Figure 2.8).

Figure 2.7. Seven Oaks Estates (Kansas City Public Schools)

Figure 2.8. Entrance to Eastern Village Cohousing (Cohousing Collaborative, LLC)

Older-Adult Cohousing, Grass Valley, California

Built for active older adults, Wolf Creek Lodge is a community in Grass Valley, California, using universal design principles (Figure 2.9, p. 34). It includes 30 private homes built as a lodge and features a 4,000-square-foot common house with a group kitchen, a dining room, laundry facilities, and other shared features. The community is located on 8.8 acres, with 3.3 acres dedicated to open space, and it is a short walk to historic downtown Grass Valley. The community has many ecological design features, including passive cooling and heating, hydronic heating, green materials, maximum natural lighting and ventilation, and an extremely energy-efficient building envelope.

Designed through an extensive planning process with its founding owners, Wolf Creek Lodge opened in 2012. Res-

Figure 2.9. Wolf Creek Lodge, a cohousing community with private homes and a common house (CoHousing Partners, LLC)

Figure 2.10. Aljoya Thornton Place (Era Living)

idents range in age from mid-50s to 80 years old. Like other cohousing developments, Wolf Creek Lodge is designed to balance the advantages of individual home ownership with the benefits of shared community facilities.

Transit-Accessible Older-Adult Housing, Seattle

Cities and communities around the country are trying to develop or redevelop sites that support transit-accessible housing for residents of all ages (Harrell, Brooks, and Nedwick 2009). The redevelopment of the Northgate regional shopping mall in the North Seattle neighborhood from a traditionally auto-dominated site into a more environmentally and socially sustainable, walkable, mixed use redevelopment offered an ideal opportunity to include housing for older adults in the transit-accessible redevelopment plan.

The redevelopment of the site includes the daylighting of a creek, new parks, a new library and community center, shared underground parking facilities, and new bike and walking trails to anchor redevelopment and connect the development with existing neighborhoods. In addition, the Northgate transit center, currently housing a number of bus lines, will also include light rail when construction is completed. The redeveloped site also includes several dense mixed use residential projects; one of these is Aljoya Thornton Place, a continuing-care retirement community that features 143 residences and a full range of community amenities and supportive services. The Northgate transit center is a short walk from the building and allows a number of residents to commute to their jobs or volunteer commitments in downtown Seattle (Figure 2.10).

Older-Adult Housing in Redevelopment Plans, East Providence, Rhode Island

Several cities and communities have realized the multiple benefits of incorporating older-adult housing developments into their downtown, neighborhood, and waterfront redevelopment plans. There are potential health and connectivity benefits for older-adult residents, while the cities and communities may avoid parking, traffic, and school construction issues that often accompany other development projects.

East Providence, Rhode Island, had been aggressively working for several years to redevelop large stretches of its formerly industrial waterfront. The city needed an early symbol of progress for the lingering redevelopment work, and that came with the opening in January 2013 of Tockwotton on the Waterfront, a five-story, $53.2 million senior care facility on 10.5 acres (Figure 2.11). Visible to passersby on nearby Interstate 195, Tockwotton alerted people to the immense revitalization project that East Providence was undertaking, and city officials saw it as the redevelopment project's turning point. Originally a nonprofit older-adult home dating back to Providence's early years, Tockwotton now accommodates approximately 150 residents in "households" of about 18 people. In these households, residents have private bedrooms, bathrooms, and kitchens, and they share common spaces.

Figure 2.11. Tockwotton on the Waterfront senior living community (Wayne Dion)

Older-Adult Housing in Community Development Plans, San Jose, California, and Rantoul, Illinois

Sometimes cities and communities have community development plans that serve certain purposes but could be modified to better integrate older-adult housing. In San Jose, California, the city had a master plan for expanding the vibrant Northside Community Center and adding affordable housing for older adults on city-owned land that had once been a maintenance yard. BRIDGE Housing, California's largest nonprofit developer of affordable housing, teamed up with a creative architect and proposed integrating the separate project elements so that the housing could be built in three-story structures rather than the envisioned four stories. This allowed for better integration with the surrounding neighborhood and lowered construction costs. The resulting Mabuhay Court development is a mix of 96 studio and one- and two-bedroom apartments. All the units have private entries, many with stoops, and can be adapted to meet the needs of the disabled (Figure 2.12).

In 1994, a grant from the state of Illinois helped turn a decommissioned air force base in Rantoul, Illinois, into Hope Meadows, an intergenerational community for adoptive families of foster children (Figure 2.13). The community's mission is to foster an environment that "promotes permanency, community, and caring relationships, while offering safety and meaningful purpose in the daily lives of older adults" (Generations of Hope 2015). The dynamics of Hope Meadows has changed over time. The original foster children have grown up and many have moved away, while many of the original adult founders and those who have joined since then now are in their 70s and 80s and facing the challenges of

Figure 2.12. Mabuhay Court and Northside Community Center (David Baker Architects)

Figure 2.13. Hope Meadows (Illinois Times)

aging. The community is increasingly functioning as a truly multigenerational, aging-supportive neighborhood, with older adults remaining active and engaged with the community and continuing to work with adoptive families.

RECOMMENDATIONS FOR HOUSING AND AGING IN COMMUNITY

Planners and public officials looking to expand the range of affordable and appropriate housing options for older adults in their communities can consider the strategic recommendations shown in Table 2.1. The examples presented throughout this chapter provide more specific guidance on individual plans and programs, and they should inspire discussion as to how they may be applicable models for other cities and communities developing location-specific plans and programs.

TABLE 2.1. HOUSING RECOMMENDATIONS

Perform an assessment of older adults' current and projected future housing needs and demand to better understand where they live, the housing options for older adults, and barriers to aging in the community.
Recognize that the vast majority of older adults do not and likely will not live in identifiable older-adult housing developments, and help educate the community.
Develop an inclusive mindset about the need for housing for older adults throughout the community.
Develop an older-adult housing plan to ensure that no older adult who wants to age in a city or community will be forced out due to a lack of appropriate and affordable housing options.
Focus on the older-adult housing plan by defining implementation action steps with assigned responsibilities and deadlines.
Develop ongoing working partnerships with organizations focused on a variety of topics (e.g., affordable housing, health care, transportation, and open space) and sectors (e.g., businesses, nonprofit organizations, and the faith-based community) to maintain momentum on implementing older-adult housing plans.
Maintain working partnerships with human and health care service providers to better integrate mutually beneficial linkages with older-adult housing developments in the community.
Review community zoning, building, and other related codes and ordinances to ensure that they are adequately flexible, promote overall community accessibility, and support older adults aging in community.
Eliminate from existing codes and ordinances any disincentives or impediments to an aging-supportive community.
Embrace new technological and service provision developments that can support the aging-supportiveness potential of the community.

CHAPTER 3

MOBILITY OPTIONS TO SUPPORT AGING IN COMMUNITY

Mobility needs to be inclusionary, serving a wide variety of households with different characteristics, incomes, and needs. It must also be balanced, providing people with a variety of different ways to reach their destinations. Planners need to ensure that all of the residents of their communities can equitably, affordably, and efficiently have access to the goods and services that meet their basic needs and that maintain and enhance their quality of life. In other words, communities need to have the goal of promoting mobility for everyone.

A key factor in achieving this goal is the adequacy, efficiency, and resiliency of the local transportation system: the interconnected network of roadways and parking facilities; sidewalks; paths, bike lanes, and bike racks; and public transit and paratransit equipment, operations, and facilities. This infrastructure provides users with the freedom to choose different ways (or modes) of travel depending on their needs and circumstances. Providing a balance among the different travel modes enables the largest number of local residents to commute conveniently to and from the place or places where they work (known to transportation planners as "journey-to-work" trips), shop, visit people and places, and recreate within their larger communities and regions. Promoting local and regional mobility also involves adequately financing transportation modes, facilities, and services so that they are appropriately maintained and can be expanded or modified to meet emerging needs. In addition, mobility should be affordable for the widest range of households possible.

Older adults have most of the same mobility needs as their younger peers: shopping, visiting family and friends, running errands, going out for dining and entertainment, and accessing medical and public services. One of the only major differences in travel behavior is that older adults take fewer journey-to-work trips—a substantial fraction of a younger household's annual travel demand—consistent with fact that many older individuals are retired or no longer work full time. Given today's economic trends and realities, however, even these traditional travel assumptions are suspect, as stagnant (and, when adjusted for inflation, even declining) wages, the increased cost of living, and inadequate retirement savings force more older adults to continue to work full time for a longer period of their lives in order to maintain an adequate standard of living and an acceptable quality of life (Scommegna 2014).

These economic constraints together with the physical limitations of older travelers—sensory impairments in hearing and vision, a slower pace of walking, more limited joint mobility, and slower reaction times, for example—pose challenges to understanding and addressing the mobility needs of this population. In addition, long-term trends in the travel behavior of older adults are changing. A decade or so ago, planners commonly assumed that "as people age, they first lose the ability to drive; they then use public transit if it is available; when unable to use public transit they walk; and finally, unable to walk, they use special transit services" (Rosenbloom 2003, 11). Rosenbloom's analyses of the mobility issues of older adults shows this assumption to be a myth. This conclusion remains relevant today, since current data still find that older Americans predominantly depend on the use of private automobiles to meet almost all of their mobility needs (Federal Highway Administration 2013). Given the dominance of travel by private automobile for older adults, planners who want to accommodate and promote aging in community will need to address the special planning issues raised by older motorists and passengers.

OLDER MOTORISTS

Automobile use remains the primary travel mode for older adults, with those between ages 65 to 84 taking about 90 percent of all their trips by car (Rosenbloom 2009). Rosenbloom

(2009, 35) also notes that "even those 85 and older take 80 percent of their trips by car, driving half the time. In fact, in 2001, older people actually made a greater percentage of their trips as drivers than did people between ages 25 and 64." She also observes that automobile travel is a significant travel mode even for those who do not drive, suggesting that many of these nondriving older passengers are dependent on other drivers, many of whom are often also older in age, to meet their mobility needs. In addition to increasing the mobility of older adults, the driving provided by friends and caregivers also reciprocally increases their social access to, and social interaction with, their older passengers.

With the enormous popularity of driving for older adults, much institutional concern is focused on the safety issues of older drivers. For example, the National Institute on Aging, the National Institutes of Health, the Centers for Disease Control and Prevention, and the Insurance Institute for Highway Safety all have similar websites directed toward older motorists, with copious online resources and reports available to enable safe driving by older drivers. These websites provide guidelines for older motorists to better assess their driving performance and encourage them to adjust their driving practices or vehicles to compensate for any age-related physical and mental limitations. These sites also strongly encourage them to stop driving if they are too physically or mentally impaired to drive safely.

These online resources for older drivers are just the tip of the iceberg. There are decades of research on the safety issues of older drivers, with some researchers examining national, state, and local aggregated crash and injury data, and a surprisingly large number of studies using relatively small sample sizes (often in the range of 20 to 50 older persons) in observational, instrumented, and survey research. Despite these data limitations, enough of these smaller studies have reached similar-enough findings in their conclusions and recommendations to be sufficiently valid to guide public policy. Some of the more relevant recent studies on older motorist safety are summarized in the following discussion.

Much of this research compares older drivers to younger ones. In assessing these studies, it is important to keep in mind the different driving experiences of older and younger drivers who may spend similar amounts of time each day driving their cars. Physical and mental limitations aside, nonworking older drivers may tend to do more varied types of local driving while running their errands, going shopping, or visiting friends. Local driving usually involves lots of stopping and starting at traffic signals and stop signs, many right and especially risky left turns, much driving around curves, and backing into and out of parking spaces. Consequently, older drivers face many opportunities to run into other cars, people, and objects—often at fairly high rates of speed if traveling on major collectors and arterials. Younger adult drivers, in contrast, usually spend an extraordinarily large amount of their daily driving time stuck in traffic, often bumper-to-bumper traffic on congested limited-access highways, commuting to and from work during rush hours. Even though there are plenty of driver distractions, any accidents that do occur are more likely to be low-speed, low-injury "fender benders." So, given the same time behind the wheel and possibly even the same distances travelled each day, one should not be too surprised to find that older drivers may have more accidents and higher mortality rates per mile than do younger drivers.

Safety Issues of Older Drivers

Although most of the non-journey-to-work travel demand of older adults may be quite similar to that of the larger population, some of their travel capabilities may be constrained by their physical and economic limitations. Many of the physical limitations of old age are obvious—sensory impairments in hearing and vision, a slower pace of walking, more limited joint mobility, and slower reaction times, for example—and older individuals can consciously compensate for many of these. But some of these physical limitations are not so obvious, such as age-correlated distortions in the estimates of the speed of approaching vehicles, slower perceptual processing time, or greater fragility (a propensity with greater age for serious injury from a fall or accident) (Cavallo et al. 2010).

Studies of accident and injury statistics show that older drivers have a disproportionally high rate of motor vehicle fatalities compared to other adult drivers, when measured on a per-mile basis (Wang and Carr 2004). Conventional wisdom is that crash rates per vehicle-mile travelled start to rise at age 70 and continue to rise with age, with older drivers becoming five or six times as likely as younger drivers to die of their injuries. This makes both accident prevention and crash protection important public health issues. Many of these trends are attributed to the physical and mental impairments of older drivers that usually increase with age, coupled with increased frailty as they get older.

Despite these assertions, the physical or mental impairments likely to be most significant in predicting driving risk for older drivers are not clear; the relationships between these impairments and age are also not clear. For example, hazard-perception response time increases significantly with age, but other factors can also account for this variation, including visual contrast sensitivity, useful field of view, and reac-

tion time. Driving performance by older adults has also been linked to age-related changes in both visual and spatial abilities and cognitive functioning (Dawson et al. 2009; Horswill et al. 2008). One study even finds that older drivers could compensate for declines in their hazard perception abilities by using augmented reality devices while driving that can direct attention toward potential hazards and assist drivers facing age-related cognitive declines (Schall et al. 2013). This strong relationship between mental impairments and unsafe driving by older drivers has led to the development of driver screening tests for older drivers that expressly test for dementia (Adler et al. 2006).

Research has also shown that the greatest risks in fatal accidents are to the older drivers themselves and their passengers (who also tended to be elderly), while, for nonfatal accidents, older drivers actually tended to have fewer injuries than younger drivers (Braver and Trempel 2004). Some of these lower risk differences can be attributed to the fact that drivers age 75 and older tend not to drive at night, and they also tend to drive at speeds less than 55 miles per hour. A study comparing crash rate of drivers of different ages after they were matched for their annual driving distances finds that "most drivers age 75 years and above were safer than younger age groups. Only low mileage older drivers (just over 10 percent of older drivers in the survey) indicated a relatively high self-reported crash rate. As a group, older drivers were as safe as or safer than other age groups" (Langford, Methorst, and Hakamies-Blomqvist 2006, 576). This supports other findings that show declining crash involvement rates for fatal, nonfatal, and property-damage-only crashes and suggests that not only are older drivers having fewer police-reported crashes but more are surviving their crashes (Cheung and McCartt 2011).

Regardless of the uncertainty about whether older drivers have a greater or lesser risk of collision in fatal and nonfatal accidents, most of the older drivers who have been surveyed by traffic safety researchers try to be safe drivers. A study of older drivers found they were able to compensate for some of their age-related physical constraints, but they still needed help with other age-related conditions that could affect their driving performance, such as inadequate time to process road conditions, difficulty in maintaining a constant speed near the speed limit, driving fatigue, and an increased sensitivity to glare (Musselwhite and Haddad 2010).

Research shows that driving is so important to older drivers that many continue to drive even when they feel it is unsafe for them to do so (Kua et al. 2007). At the same time, older drivers recognize the need for continuous assessment of their safe driving performance and their knowledge of the rules of the road. Older drivers also engage in compensatory advance planning to offset their age-related mental and physical limitations, such as planning out routes, familiarizing themselves with street names before traveling to a destination, driving less and taking shorter trips, and avoiding nighttime and poor-weather driving. Older drivers' compensatory adjustments to the limitations of old age are known as "self-regulation," and these changes in driving behavior and performance have been the subject of several recent research studies (Baldock et al. 2006; Blandcard and Myers 2010; Reuchel and Mann 2005).

Planning for Older Motorists

Most of the public policies responding to the extensive research literature on older drivers focus on traffic safety issues. These include periodic testing and relicensing of older drivers to screen for driving impairments that can raise accident risks, and designing vehicular safety systems that can better protect occupants to compensate for the greater fragility of older drivers and their often older passengers.

One strategy for improved safety among older drivers is in-person elderly license renewal programs. These programs have been shown to reduce driver fatality rates, especially among the oldest drivers (ages 75 to 84) (Grabowski, Campbell and Morrisey 2004). More stringent licensure policies (such as vision tests, road tests, and more frequent license renewal cycles) have not been independently associated with any additional safety benefits. Cognitive testing and screening tools, though, may be worthwhile in promoting the safety of older drivers (Adler et al. 2006; Ball et al. 2006; Dawson et al. 2009; Marshall et al. 2013).

A second way to address traffic safety is the periodic retraining or re-education of older drivers, especially where prior motor vehicle collisions or testing during driver licensing renewals indicate potential safety risks. Research about the effectiveness of this approach show mixed results, with some findings providing only limited evidence that physical and visual perception retraining improved driving skills in older drivers and moderate evidence that educational interventions improved driving awareness and behavior, even though they did not reduce crashes in older drivers (Kua et al. 2007). Other more recent research has been more positive, indicating that active training was effective in getting drivers to scan threat conditions much more frequently (Romoser and Fisher 2013). The results of skill-based training seem so promising that the National Blueprint for Injury Prevention in Older Drivers, an initiative of the Canadian Association of Occupational Thera-

pists (2009), continues to promote older-driver retraining programs as an important driver safety strategy.

A third approach is to increase the survivability of older drivers and their passengers in case of accidents. This essentially involves the design of driving safety systems that can take into account the greater fragility of older drivers. Some of these safety systems are internal, such as better design of seat belts and other restraining devices (Youn 2013).Others, of greater interest to planners, are external, including the design of roadways and intersections and their associated facilities (signage, lighting, reflectors, and guard rails).

Most of the planning interventions involve the third approach to older driver safety—improving road conditions, signage, lighting, and signalization. The following sections describe these strategies in more detail.

Vehicle Safety Features

Economic limitations may affect mobility for older people on fixed incomes. Those older adults who own cars tend to keep them longer (Federal Highway Administration 2013) and drive them fewer miles per year than younger drivers (Federal Highway Adminstration 2010). Older vehicles might have basic safety features such as seatbelts, antilock brakes, and airbags but still lack the most current generation of safety features. These can include such things as adaptive headlights, braking or cruise control, blind spot and backup sensors, backup cameras, electronic stability control, tire pressure monitors, lane departure warning systems, and automated parallel parking systems (Gorzelany 2013). The most dramatic impending technological change on the horizon is likely to be the development of self-driving cars, which hold the promise of eliminating any physical and cognitive constraints on mobility for older drivers. However, as with the current generation of sophisticated automotive technologies, autonomous vehicles (and the physical infrastructure they might need to function efficiently) are likely to be expensive options.

Many of these newer automotive safety features can help offset some of the physical constraints of aging. For instance, automated parking systems and backup or blind spot sensors can help counteract some of the perceptual limitations of older adults with less flexible joint mobility, while adaptive cruise control or braking systems can help compensate for the slower reaction times of older drivers. Although some of these "high-tech" features might distract rather than assist some drivers, the benefits of some of these automotive technologies (such as backup cameras) are slated to soon become mandatory on all new automobiles because of their proven safety benefits. But having access to such safety features also assumes a sufficiently high personal income stream during retirement to be able to purchase a new or newer used car more often than might otherwise be needed to meet an older person's low-mileage basic mobility needs.

CarFit, Parkway Senior Center, Utica, New York

Some of these planning interventions can be as simple as ensuring that vehicles are properly adjusted to meet their older drivers' needs and physical attributes—for example, mirrors aimed to cover blind spots and seats adjusted properly to enable older drivers to easily reach the accelerator and brake pedals while maintaining a safe distance from the steering wheel's airbag. CarFit is a national training program to help older drivers adjust their vehicles for the best "fit." The Parkway Senior Center in Utica, New York, held an event to help older drivers with their vehicles, after staff members of the center received CarFit Technician Certificate training sponsored by the Alleghany Rural Health Network. The center also distributed information about various transportation options at this event.

Better Road Design

The Federal Highway Administration (FHWA) (2009) has developed guidelines for designing roadways for older adults. More clearly demarcated lanes, curbs, crosswalks, and intersections; larger safety and directional signage placed further up roads from intersection decision-points; and longer sightlines can all help older drivers compensate for some of their perceptual and cognitive impairments. Analyses of traffic accident data indicate that left turns are especially risky maneuvers for older drivers, especially if they have difficulty gauging the speeds of approaching cars, so special care should be given to designing intersection and traffic signals—with dedicated left-turn lanes and separate left-turn traffic lights being of greatest assistance. Roundabouts (traffic circles and rotaries) can also slow traffic speeds and minimize dangerous left turns, though these safety benefits might be offset for older drivers by their less predictable traffic patterns and by requiring too many access decisions too rapidly for older drivers to easily process. Although there may be a great deal of flexibility in choosing among various intersection design options for various locations, the FHWA and state engineering and design guidelines might limit the range of acceptable choices, especially on state and county highways.

As with pedestrian facilities, road maintenance and plowing become critical issues for older drivers with their longer reaction times, especially during winter months. Lower speed limits and the use of traffic-calming measures near

senior citizen centers, assisted living centers, and retirement communities can also help reduce serious injuries and fatalities to older drivers involved in collisions. Street trees placed close to roadways might also tend to cause drivers to reduce their speeds on residential streets.

Improved Night Lighting

Because glare is often cited as a perceptual constraint for many older drivers, strategies that reduce the contrast between headlights and ambient lighting might mitigate some of these issues. One way to do this is to increase the level of ambient lighting by increasing the density or brightness of street lights on busy streets, although over-illumination has the risk of generating "light pollution" externalities affecting adjacent homes and businesses.

On the other hand, those older drivers who are most susceptible to glare at night may simply self-regulate and just decide to forego driving at night, reducing the need for a community to increase its levels of street lighting for traffic safety purposes (though maybe not for crime prevention). Improvements in automotive technology, such as a wider use of adaptive headlights or self-dimming rearview and sideview mirrors, might also resolve some glare problems for older drivers as they become more common accessories in the future.

Better Site Planning of Parking Lots

Parallel parking is especially problematic for many older drivers simply because they might lack sufficient flexibility to rotate their heads and necks around to gauge their proximity to other parked cars, to traffic, or to the curb. Similar perceptual issues may arise with 90-degree or angled parking, where the driver's head must swivel around to see approaching traffic while backing up. In such cases, creating one-way lanes of single-row parking might be a good compromise for age-friendly residential communities—the older driver can pull into a parking space and then drive straight out of the space into the next lane. Wider parking stalls (9 to 10 feet wide) would also assist older drivers parking their cars and accessing their vehicles.

The downside of such an approach is that the vehicle capacity of the lots would greatly decrease compared to more traditional double-loaded parking lane designs. This would also require larger parking lots, making parking a much more expensive component of a project. The impervious surface per vehicle would also be greatly increased, in turn increasing urban stormwater runoff. Some of these deleterious impacts can be reduced by using permeable paving to promote stormwater infiltration, or installing landscaped islands into lot designs for aesthetics and to break up the scale. Passive parking can also be better integrated into more active uses of paved residential space, similar to a Dutch woonerf, but with one-way traffic flow through the age-friendly complex.

Alternatively, automotive technology might come to the rescue. Self-parking cars are now a reality, and rear sensors and rear-view cameras can help older drivers better compensate for their age-related physical limitations, perceptual constraints, and lack of flexibility. If such emerging technologies become the norm, then the single-row stalls can always be reconverted to a more traditional double-stall layout, with the hardscaped parking lots reduced in area to allow more perimeter and internal landscaped greenspace.

Provision of Specialized Transportation Services

A number of communities and organizations have recognized, and responded to, the centrality of the automobile to the mobility of older adults by organizing ridesharing and volunteer-driver programs as part of their alternative, specialized transportation services. These services can also include vans, small buses, or taxis and are characterized by being demand-driven transportation options, similar to (but usually broader in scope than) the paratransit services provided by transit agencies under the Americans with Disabilities Act (ADA) (Ellis, Lynott, and Fox-Grage 2010). AARP has found that specialized transportation programs can be quite effective in meeting the mobility needs of older adults who no longer drive or who do not own cars, and these mobility programs are discussed in more detail in the section dealing with older transit users (p. 50).

One concern associated with specialized transportation is the service provider's potential legal liability with respect to accidents and other events affecting older adult users (McAuliff 2014). Some specialized transportation providers—such as the Ride Connection program in Portland, Oregon—have adopted risk management programs requiring that volunteer drivers undergo criminal background checks, drug testing, and extensive training. Oregon's Department of Motor Vehicles also notifies the Ride Connection program of any collisions or moving violations involving its volunteer drivers. Some of these issues can be addressed by having independent taxi drivers adopt voluntary guidelines for serving older passengers. An example of this approach is the Senior Friendly Taxi Driver Certification Program created by Knoxville-Knox County Community Action Committee in Knoxville, Tennessee.

Deikel Transportation Program, Minnetonka, Minnesota

The National Center on Senior Transportation cites as an urban "best practice" the Deikel Transportation Program of the Jewish Family and Children's Services of Minneapolis (JFCS), in Minnetonka, Minnesota, which has both a volunteer driver program and a volunteer escort program for those older adults needing physical assistance. The organization arranges for volunteer drivers and escorts to accompany older adults on trips for medical appointments, shopping, and for any other purpose within the West Metro community of Hennepin County and into Minneapolis' central city for reservations made five days before the trip. Paid drivers also supplement the volunteer services. The older-adult clients pay JFCS a fee for these services determined from an income-based sliding scale (ranging between $7 and $13 per hour). JFCS's accompanied transportation initiatives have provided over 700 rides for medical appointments and 500 trips to run errands.

KeoweeCares, Salem, South Carolina

The National Center on Senior Transportation also identifies the KeoweeCares driver volunteer program in Salem, South Carolina, as a similar "best practice" for rural communities. The program provides rides free of charge to older adults wanting to travel within a 50-mile radius of the community. KeoweeCares is a social service organization that provides about 450 rides per year through its 125 volunteer drivers. The program also provides various services to support individuals, including in-home care, and help them to remain in their homes. A similar model rural neighbor and driver volunteer program has also been instituted by Kindness Cares, Inc. in Mountain Home, Arkansas.

TRIP Program, Independent Living Partnership, Riverside County, California

The TRIP program of the Independent Living Partnership of Riverside County sidesteps most of the issues and challenges transportation organizations face by having the older adults and individuals with disabilities who lack mobility arrange for and recruit their own volunteer drivers. The volunteer drivers receive mileage reimbursements from the Riverside County Transportation Commission for providing the door-to-door mobility services, and their older adult passengers receive free rides. The TRIP program—started in 1993 through collaboration between the Independent Living Partnership agency, the local area agency for aging, and the county's transportation commission—currently provides about 10,000 trips per month to Riverside residents.

OLDER PEDESTRIANS

Travel by foot has always been an important aspect of urban living, and pedestrianism is an especially popular topic today. Some planning principles support the convenience and increased sociability promised by higher-density residential and mixed use. Promoting pedestrianism for older adults is also justified by the physical exercise and other health benefits promoted by the active design and healthy cities movements (a theme examined in greater detail, for example, in the June 2014 issue of the *Journal of Planning Education and Research*). Healthy Cities programs have been especially popular in Europe where, in 2000, walking and cycling accounted for a third of all trips in Germany and half of all trips in the Netherlands, compared to a tenth of all urban trips in the United States (Pucher and Dijkstra 2003).

Despite these benefits and increasing interest in active transportation, only about nine percent of all trips taken by those age 65 and older in the U.S. are walking trips (Rosenbloom 2009). Rosenbloom (2009, 35) also notes that "for older adults who don't drive (almost all women), walking accounts for almost one out of every four trips, with its importance increasing with age." This implies that walking will likely become an even more important travel mode as the urban population continues to age. The fact that a growing number of older pedestrians are likely to be female also suggests that planners may need to address public safety issues along with more traditional pedestrian mobility concerns in planning more walkable cities and denser suburbs.

Promoting pedestrianism for older adults might be even more difficult in lower-density suburbs, however, given suburbanites' accommodation of and reliance on the automobile. There are also likely to be longer distances between an older adult's suburban residence and any potentially walkable destinations that can meet some daily needs. In areas with concentrations of older adults, the public health benefits of walking as a form of moderate, weight-bearing exercise might justify retrofitting neighborhoods with sidewalks and other pedestrian amenities to promote this travel mode—even if shopping, recreation, and medical services might be located beyond the relatively short walking distances that figure so prominently in calculating an area's walkability score.

Pedestrian Safety Issues

Much of the research discussed in the following sections has shown that there are significant age-related differences even in the simple task of walking in urban areas, making even

a stroll around the neighborhood by older adults a surprisingly complicated issue to examine, let alone to promote, though urban design interventions. For example, a review of pedestrian safety research by the FHWA (Federal Highway Administration 2003) finds that risk of serious injury and death varies with the time of day, since about 60 percent of fatal collisions between automobiles and pedestrians occurred in the evening and at night (between 6 p.m. and 6 a.m.), especially in urban areas, even though over 60 percent of all pedestrian crashes occurred during daylight hours. The study also surprisingly finds that "for the oldest age group (age 75+) backing vehicles seem to constitute the greatest risk (19 percent)" (Federal Highway Administration 2003, 26), a conclusion with some interesting implications for parking lot site planning. Fewer than three-quarters of one percent of pedestrian collisions were attributable to vision or hearing impairments or some other physical disability on the part of the pedestrian, a very low measure given the likely extent of such impairments in older populations.

Older adults tend to have some different physical characteristics than younger adults, even as pedestrians. Many of these characteristics are concisely summarized in Table 3.1 (p. 46), which relates the physical attributes of older pedestrians to specific transportation-related impacts. One characteristic not addressed in the table is that they are less resilient when injured; older pedestrians tend to be much more susceptible than younger adults to serious injury and death resulting from accidents, especially collisions with cars. Research shows that the average risk of severe injury and death for pedestrians stuck by vehicles increases significantly as the speed of impact increases. For example, the risk of severe injury reaches 10 percent at an impact speed of 16 miles per hour and increases to 90 percent at 46 miles per hour (Tefft 2011). However, these risks varied significantly with age—for example, the average risk of severe injury or death for a 70-year-old pedestrian struck by a car travelling at 23 miles per hour is similar to the risk for a 30-year-old pedestrian struck at 35 miles per hour. The FHWA's pedestrian safety study had also noted that "older pedestrians are more likely to succumb to their injuries than younger adults" (Federal Highway Administration 2003, 24).

Crossing streets is a particularly hazardous undertaking for older adults, even when the crossings are controlled by traffic lights with walk signals. Part of the risk might be attributable to their generally slower speed of walking when compared to younger adults, resulting in more time needed to cross the street. Studies have examined the gait speed of older adults when crossing streets (Cavallo et al. 2009; AAA Foundation for Traffic Safety 2007), and the slower speed was attributed to the loss of muscle mass in old age, joint disorders, spinal compression, reductions in pulmonary and cardiac capacity, and reduced sensory perception (Carmeli et al. 2000). Older adults with mobility impairments (but not using wheelchairs) are even slower crossing streets with pedestrian signals. One study finds that even if crossing signal times were lengthened to accommodate a lower walking speed, most people using walkers and about half of those using canes would still not be able to cross the street during the signal period (Arango and Montufar 2008). These differences in gait speed have obvious and important consequences for signal timing and duration at pedestrian crosswalks and even for the design of intersections.

Besides walking slower and being less resilient than younger adults, older pedestrians also have some interesting perceptual issues associated with aging that raise important planning issues. One of the most significant of the issues involves changes in the acceptance of risk with age. Research shows that older pedestrians in experimental situations exhibited more risky behaviors when vehicles approached at high speed and missed many opportunities to cross when cars approached at lower speeds, leading to the conclusion that motion perception played an important role in their street-crossing decisions. High vehicle speeds appeared to be an important risk factor, since the older the subjects were, the more their motion perception abilities were impaired, often leading to an overestimation of the time available for crossing and unsafe crossing decisions (Cavallo et al. 2009, 2010).

Other factors can also affect the risk preferences and behavior of older pedestrians. In a comparison of older (age 70 and above) and younger (ages 40 to 49) pedestrians and cyclists, the older adults appreciated pedestrian crossings, signalized intersections, and cycle paths significantly more than the younger group did and, moreover, felt it was dangerous to cross roads where these facilities were missing. Older pedestrians also appreciated pavement more while younger pedestrians appreciated fast passage. These different preferences appear related more to perceived differences in health and physical abilities than to differences in age and sex, with older respondents expressing doubts about their own abilities and justifying their decisions on the basis of feeling safer.

Perceived safety, based on street characteristics (such as traffic conditions, roadway characteristics, and signal controls), has also proven significant in surveys of pedestrians' decisions to cross a street at mid-block or at intersections. One study finds that older pedestrians partially compen-

TABLE 3.1. CHARACTERISTICS OF OLDER PEDESTRIANS

Characteristic	Result	Effect
Reduced range of joint motion	Slower walking speed	• Crossing times • Mean journey length
Vision problems, such as reduced acuity and poor central vision	Reduced ability to scan the environment	• Ability to detect and avoid objects • Sign legibility • Curb detection • Crossing locations • Trip hazards • Maps
Limited attention span, memory, and cognitive abilities	Need for more time to make decisions, difficulties in unfamiliar environments, and lack of understanding of traffic signals	• Positive direction signage • Legibility of streetscape • Consistency of provision
Reduced tolerance for adverse temperature and environments	Preference for sheltered conditions	• Route location and exposure
Decreased agility, balance, and stability	Difficulties in changing level	• Provision of steps/ramps • Curb height • Gradients • Handrails • Surface quality
Increased fear for personal safety and security	Fear of using all or part of a route	• Lighting • Surveillance • Lateral separation from cars • Provision of footpath • Traffic speed and density
Slower reflexes	Inability to avoid dangerous situations quickly	• Crossing opportunities
Reduced stamina	Shorter journeys between rests	• Resting places • Shelter
Reduced manual dexterity and coordination	Reduced ability to operate complex mechanisms	• Pedestrian-activated traffic signals

Source: NZ Transport Agency 2008

sated for slower walking speeds and longer crossing times by waiting for longer traffic gaps before crossing when compared to the crossing preferences of younger adult pedestrians, so that similar safety margins and unsafe-decision rates were found for both younger and older pedestrian cohorts (Chu 2004).

Planning to Promote Pedestrianism for Older Adults

Given the physical and perceptual impairments of older pedestrians, a number of sound measures have been proposed to make the pedestrian environment more inviting. The 1988 report *Transportation in an Aging Society* (Transportation Research Board 1988) was one of the first studies to develop a series of general guidelines to improve the mobility of older adults through recommendations such as the following:

- Renewal licensing of older drivers
- Periodic vision testing
- Driver and pedestrian training
- Improved crash protection for older drivers
- Improved safety for older pedestrians at intersections (including improvements in signalization, signage, and roadway marking and design)

These licensing, training, and design measures seek to reduce the risks of vehicle collisions involving older drivers by reinforcing the rules of the road, requiring safer cars, and en-

suring that older drivers maintain the perceptual and cognitive capabilities needed for safe driving. Many of these programs also seek to protect older pedestrians from such collisions as well by encouraging and promoting safer road crossings. Most of these age-related recommendations have already been put into place by most states, and compensatory design features for many of the physical impairments of an aging population have also already been addressed by requiring compliance with the ADA's design guidelines within the public realm.

It is not only environmental design that is perceived to affect the safety of older pedestrians. A study of older pedestrians in Sweden finds that the major environmental barriers identified by the subjects involved maintenance and behavior, including poor snow removal and slippery walkways, bicycles ridden on sidewalks, or mopeds driven on shared pedestrian pathways (Stahl et al. 2008). A lack of benches in the area was also a barrier to mobility, with respondents reporting that it was difficult for them to walk very far without resting.

Other issues identified in the Swedish study include desires for more traffic signals at pedestrian crossings, clearer indications of pedestrian crossings, more curb cuts, and better maintained and more even walking surfaces. As noted earlier, older pedestrians in the U.S. express similar preferences (Bernhoft and Carstensen 2008). These improvements became even more important for those older respondents using assistive walking devices such as canes, walkers, and rollators (wheeled walkers), which were becoming more commonly used in Scandinavian countries at the time of the study. While rollator users in Denmark were generally satisfied with the devices, the rollators were also found to pose significant problems when used in outdoor environments and when users accessed buses (Brandt, Iwarssons, and Stahl 2003).

The FHWA's *Handbook for Designing Roadways for the Aging Population* (2014), though focusing mostly on the needs of older drivers, also sets guidelines for older pedestrians by recommending changes to crossings, signalization, and intersection design. A few sensible planning recommendations from this handbook and from recent research can greatly benefit older pedestrians and are reviewed in the following discussion.

Traffic Calming

Reducing vehicle speeds around facilities serving older adults (such as senior centers, assisted living centers, retirement communities, and nursing homes) can do much to promote pedestrian safety, especially given the relative frailty of older adults when involved in vehicle accidents. These measures can include installing speed bumps near pedestrian crossings—or as described in New York City's pedestrian design guidelines, raising the elevation of the crossings themselves (DeGood 2011)—and using rotaries at intersections in proximity to these facilities. If older pedestrians tend to underestimate the speed of rapidly approaching automobiles, then reducing vehicle speed is a logical strategy.

Signalization

Traffic signals can be installed and walk signals lengthened in areas where older adults are concentrated, with pedestrian countdown signals used on thoroughfares that must employ shorter signal times for congestion mitigation, in higher density and downtown locations, near transit stops, and in proximity to more vulnerable populations (i.e., children and older adults). As discussed earlier, gait speed tends to be reduced with physical decline, but people tend to walk faster when countdown signals are used. Older pedestrians also have higher rates of signal compliance than younger adults and most pedestrians in a survey preferred countdown signals to "walk/don't walk" ones (AAA Foundation for Traffic Safety 2007).

Signalization is a complicated issue, especially when the traffic signals are part of a coordinated network designed to maximize traffic flow on a major street. The lengthening crossing times can have different impacts on coordinated intersection operations depending on the degree of congestion and level of service (AAA Foundation for Traffic Safety 2007). In general, lowering walking speeds would result in minor to moderate increases in traffic delays. However, reduced walking speeds to accommodate the slowest 15 percent of older pedestrians at intersections with low levels of service would cause moderate and major delays. Delay increases significantly, however—in some cases, exponentially—when pedestrian times approach minimum green times on heavily congested streets and on wider major street approaches to the intersection.

Prioritizing Pedestrianism

Another strategy is simply to favor walkers over drivers. Signalization and other environmental interventions can reduce some of the conflicts between pedestrians and automobiles but many would claim that pedestrianism should be given preference over automobile use as a travel mode choice. For example, a recent mobility plan proposed for Washington, D.C., seeks to provide more and safer pedestrian infrastructure as a key transportation goal for older residents (McAuliffe 2014). On the other hand, in lower-density rural and suburban areas with low walkability indexes, prioritizing pedestrianism as a travel

mode might not be as feasible a planning objective, especially since a majority of aging-in-place elderly residents will likely continue to reside in suburban settings (Rosenbloom 2003).

Under most state laws in the U.S., drivers are usually held responsible for foreseeable accidents involving pedestrians, but there is often significant discretion exercised by police in giving tickets and by judges in handing out fines and other penalties. Some countries, such as the Netherlands and Germany, give pedestrian modes much more deference than is normally shown to them by U.S. motorists, by imposing draconian traffic fines and other penalties on drivers who do not stop for pedestrians in crosswalks, greatly reducing vehicle speed limits in their denser central cities, and by employing traffic-calming measures in residential neighborhoods (Pucher and Dijkstra 2003).

U.S. planners can learn a great deal from these international practices. One approach to importing these values and measures to the U.S. is to emulate higher European urban densities and embrace continental practices of allowing mixed uses in residential settings in new development and redevelopment. But it might be more difficult to transfer some of these strongly pro-pedestrian laws and measures to existing post-WWII single-use, lower-density U.S. suburbs and neighborhoods since local officials might be reticent to impose additional burdens on residents who rely on their cars for their primary mode of transportation to meet their daily needs. Most U.S. drivers, for example, would probably not support the installation at most main intersections of automated speed cameras that generate extremely large fines for traffic violations. Such pedestrian-friendly strategies would not likely be a politically popular way for communities to reduce accident risks to older pedestrians, despite their likely effectiveness.

Land-Use Planning

Communities can help reduce automobile and pedestrian conflicts simply by changing zoning to locate districts that accommodate older adults (such as assisted-living facilities, nursing homes, and retirement communities) near thoroughfares with lower traffic volumes. This would allow traffic calming, signalization, and pedestrian crossing design strategies to be employed to slow vehicle speeds with minimum disruption to the community's road network and its traffic capacity. The reality, however, is that congregate living facilities for older adults are often located near the busiest roads and commercial areas by default, since those are the areas least desirable for single-family detached housing.

Traditionally, residential uses for older households are typically deemed to be multifamily or institutional uses. Under traditional planning principles, the districts allowing them often serve as a type of transitional zone, to buffer single-family neighborhoods from the externalities of adjacent traffic and commercial uses. Clarence Perry, for example, used these concepts in creating his neighborhood unit in the 1920s, and it still remains a viable strategy today. New urbanist developments often site denser multifamily uses near commercial areas or adjacent to major transit nodes (today, reinterpreted as transit-oriented design), with more desirable single-family detached housing located as far as possible from such busy, noisy, and congested locations.

Locating housing for older adults in proximity to a busy highway or rail line is often justified as being in the older residents' best interests. Despite their adverse impacts on quality of life and to pedestrian activity (especially the crossing of a busy street or rail line), these siting strategies would, in theory, allow older residents more convenient access to transit and to nearby commercial uses. A more rational planning strategy might be to locate housing and other residential facilities for older households on the side streets adjacent to major thoroughfares but still within the single-family zones, where traffic can be calmed with speed bumps, crossings clearly delineated, and stop signs employed without impairing the traffic flow or level of service of the nearby major street.

Better Design of Pedestrian Facilities

Improving the design of pedestrian facilities near concentrations of older adults would also help improve the health and well-being of older pedestrians. This involves the design and provision of such basic amenities as sidewalks, curb cuts, paved paths, street trees and other landscaping, street furniture (including the placement of more benches located closer together on a block), and adequate street lighting as part of a commitment to good urban design. This extends to the design of pedestrian surfaces, which should employ a uniform, well-drained, and level paving surface whenever possible to minimize the risks of falls by older pedestrians. The use of brick and granite paving in place of concrete, for example, may give a redeveloped commercial strip an upscale appearance for marketing purposes, but bricks can crack or chip over time, making their surfaces uneven, while granite may become slippery during rainstorms or snowstorms or when covered by wet leaves in the fall.

It also involves a financial commitment in local capital improvement programs to adequately maintain the facilities

so that they do not pose risks to older users as the infrastructure itself ages. Concrete spalls, sidewalks crack from tree roots and from freeze-thaw cycles, benches get vandalized, and road crossing markings fade over time with weather and traffic. Sidewalks near where older adults live may also need to be plowed in colder climates—the same as public roads plowed during the winter and slippery leaves seasonally cleared from sidewalks in more temperate climates—to ensure that walking surfaces remain uniform in order to help prevent accidental falls by more fragile older pedestrians. This may require that either taxes be raised to support such increased services or that the developers or residents of facilities serving older adults pay a special assessment to cover increased plowing and maintenance of the public sidewalks and other improvements in proximity to the facilities.

Safe Routes for Seniors and Safe Streets for Seniors, New York City

State and federal grants also can occasionally be used to improve pedestrian facilities for older adults. For example, the New York State Department of Health's Healthy Heart program funded a Safe Routes for Seniors initiative for New York City that resulted in improved design guidelines, going beyond just meeting ADA standards, that were explicitly designed to improve the pedestrian environment of older residents in order to promote their cardiovascular health (DeGood 2011). These guidelines included putting lower-volume streets on "road diets," reducing crown and grade changes within streets, extending pedestrian crossings further into roadways to improve sight lines, building landscaped refuge islands in the medians of broader streets, installing benches near transit stops, delaying turns for 10 seconds after traffic signal changes, and moving automobile stop lines farther back from intersection crosswalks (as well as raising the crosswalks themselves).

In 2008 the City of New York launched a Safe Streets for Seniors initiative, modeled after Safe Routes for Seniors. Crash data helped in the development and implementation of measures to improve the safety of older-adult pedestrians as well as other road users. In 2012 the city expanded the program to incorporate 12 new variables, including older-adult trip generators, concentrations of existing senior centers, and older-adult housing locations. The program evaluates neighborhood pedestrian conditions from an older-adult perspective to identify possible improvement, such as lengthening pedestrian crossing times at crosswalks to accommodate slower walking speeds, constructing more pedestrian safety islands, widening curbs and medians, narrowing roadways, and installing new stop controls and signals.

Redesigning Roads

Finally, older pedestrians might benefit from the redesign of roads, to allow them safer crossings in areas where there are concentrations of older adults (such as near a community senior center or retirement community). The FHWA's (2014) roadway design handbook addresses many of these proposals from the perspective of enhancing the safety of older drivers, but many of these strategies can also improve the pedestrian environment. Urban design strategies that narrow roadways at intersections by extending crosswalks into parking lanes (as well as by better delineating crosswalks through the use of different paving materials or colors) are fairly common design elements when business areas or commercial strips are revitalized. They are also useful features to help older pedestrians cross busier streets by reducing both the crossing distance and the older pedestrian's period of vulnerability within the roadway. Increased sight radiuses, better lighting, and clearer signage also help drivers avoid accidents involving pedestrians.

Other roadway design strategies might also help older pedestrians reduce road crossing risks, in addition to reducing traffic speeds through traffic-calming measures, such as installing speed bumps and signage. For example, redesigning the roadway by employing a road-diet strategy (converting a four-lane roadway to three lanes, with the center lane used for turns) might also enable the center lane to provide a refuge area for pedestrians using clearly marked midblock crosswalks if they misgauge the speeds of oncoming cars. Alternatively, median strips or boulevards might be constructed at especially wide crossings to provide a safe refuge if gait speeds are too slow to conform to crossing signal durations or traffic volumes are high enough to result in a significant reduction in level of service were signal walk times to be increased. The FHWA's (2003) pedestrian safety survey, however, cites one study in London that found that such pedestrian refuge areas actually increased pedestrian crashes if the refuges were not clearly designed and demarcated for their protective purpose.

Larger or illuminated signage, controlled crosswalk signals, or crosswalk signage placed above or within the roadway itself can emphasize to drivers the location of pedestrian crosswalks and help older pedestrians avoid accidents when crossing streets. Moving vehicle stop lines further back from the crosswalks can also improve driver sightlines and promote pedestrian safety. Transportation for America, for example, notes that Detroit saw a 35 per-

cent drop in injury crashes for drivers age 65 and older and a 4 percent drop for drivers ages 25 to 64 after the city repainted median strips, upgraded walk lights, installed larger and brighter stoplights, and added left-turn lanes on one busy street (DeGood 2011).

OLDER TRANSIT RIDERS

There is a strong assumption by some planners that after older adults stop working, they rely on public transit services as their major travel option. A number of organizations also advocate for better accommodation of the needs of older riders in transit services (Torres-Davis 2008). However, Rosenbloom (2009, 33) notes that "there is no evidence that older people suddenly begin to use public transit upon retirement. In fact, there is far more evidence that older adults are even less likely to use public transit when they than when they are in the labor force. Most public transit services are best at meeting the needs of those traveling to work, and not those making other kinds of trips." A transit ridership model in Honolulu, however, did forecast that being elderly, retired, or both would actually increase the rates of transit use, when compared to driving, being an automobile passenger, or walking (Lucas, Archilla, and Papcostas 2007).

Rosenbloom (2009) finds that only about 1.3 percent of trips by those 65 years and older were made using any form of public transit, a lower use of transit than by younger people. She also reports that older nondrivers—those who have never driven or drivers who have stopped driving because of their age-related impairments; who have been forced to stop driving by a licensing authority after screening or an accident; or who can no longer afford to own, park, or maintain a car—made only about 8 percent of their trips using public transit. But more recent data from the 2009 National Household Travel Survey show that these low transit ridership trends might be in the process of reversing (Lynotte and Figueiredo 2011). The travel survey data indicate that 2.2 percent of trips by people over 65 years of age were on public transit in 2009, an increase of 40 percent over the rate of transit use by older riders in 2001. Despite these increases, older adults, even those with disabilities, are still more likely to travel to their destinations as automobile drivers and passengers in private motor vehicles than as public transit riders (Sweeney 2004). Automobile dependency should become even more critical for older adults living in rural or exurban communities, which are more likely to have infrequent, inaccessible, or limited-route public transit services available. However, Kim (2011) also found that getting a ride was the most preferred mode of transportation, regardless of residential environment.

Several local initiatives can help nondriving older adults use public transit services more to provide them with needed mobility. Door-to-door paratransit services can be provided to those older adults who are unable to drive because of significant physical or mental limitations and who, because of the severity of their disabilities, are also unable to access or use fixed-route transit services. Complementary paratransit services (encompassing roughly the same service area as the fixed-route transit system) must be provided to those with significant disabilities. Public transit agencies are also required by the ADA to reasonably accommodate less disabled riders by modifying their transit vehicles (installing wheelchair lifts or lowering the vehicle's chassis to assist entry). ADA compliance also includes modifying transit facilities—such as bus, subway, railroad, and transit stations—as well as vehicles to reasonably accommodate less disabled riders. This might involve the installation of elevators or ramps, for example, and the announcement of transit routes and stops for vision-impaired riders. The Federal Transit Administration's ADA regulations (CFR Title 49, Subpart A, Part 37), however, mandate the provision of door-to-door paratransit services within three-quarters of a mile of a fixed-transit route or station for those older adults who are deemed to be significantly disabled.

Given the very high costs of providing individualized, door-to-door paratransit services to older adults with significant physical or mental disabilities, public transit agencies may want to be sure that the users' disabilities are deemed significant enough for them to qualify for such services. In one study, about eight percent of 500 applicants for specialized paratransit services were found to be ineligible for these services based on rehabilitation specialists' assessments of their physical and cognitive abilities (Griffin and Priddy 2005). When given the choice between transit services and paratransit, the choices of older riders were influenced by income level, age, and fare differences (with females more likely to choose paratransit). A rider's age had a larger influence on whether they chose to use transit or paratransit services than economic considerations. Older individuals, for example, were more likely to choose paratransit than transit services, but fare differentials between transit and paratransit services had less of an effect on a rider's choice (Franklin and Niemeir 1998).

Increasing Ridership

Even though transit ridership by older adults increased by about 40 percent between 2001 and 2009, the Beverly Foundation (2004) examined many of the impediments to transit use by older adults and developed some innovative proposals to increase elderly ridership. Many of these proposals can help continue the increase in transit use by older riders today. The Beverly Foundation study finds that the reasons most older adults do not use public transit include concerns about safety, the inability to pay fares, the lack of awareness of transit options, the inability to walk to buses or trains, the difficulty getting into transit vehicles, the inability to travel alone (because of mental or physical impairments), and the fear of getting lost. The report also notes that many older riders may perceive public transit as not "senior friendly" and that many may also find travel by transit to take too much time.

Proposed solutions to these issues include the provision of paid or voluntary escorts to assist older riders, the use of more ADA-compliant buses and transit vehicles, more training and information about transit routes and options, the expansion of routes and schedules to better accommodate older riders' needs and destinations, and call-a-ride programs to pick up older riders at their homes. Research has shown that many of the strategies proposed by the Beverly Foundation might be successful in further increasing ridership by older adults. Computerized real-time transit service monitoring and delivery might also make transit more accessible to older riders (Carmien et al. 2005). Training older riders about transit routes, schedules, and services has also resulted in an increase in bus use by these riders compared to untrained riders, up to three months after they were trained (Stepaniuk 2008).

Knowing more about the travel behavior of older adults can enable transit service providers to better meet the needs of older riders. A ridership study in Sydney, Australia, found the major influences on the trip chaining and modal choices of older adults over 64 years of age were the currency of their drivers licenses, whether they lived with a partner, and their specific older age ranges—with loss of a driver's license or spouse leading to increased risks of social isolation (Hensher 2007). An earlier U.S. study of the travel patterns and travel mode choice of older adults found that they are more likely to use transit if they live within five blocks of a bus stop, and they are more likely to share a ride with others when chaining trips, doing errands, or going to a medical appointment. They are less likely, however, to use transit when going shopping or doing errands (Kim and Ulfarsson 2004). They are also more likely to walk when taking personal or recreational trips and are more likely to drive or carpool if they have higher incomes. When they use public transit, older riders have different travel patterns than those of the general population, preferring the earlier part of the day for recreational trips (Okola 2003). Women are also less likely to consider public transit or walking as their preferred transportation alternative when they can no longer drive, while Hispanics are more likely to consider public transit as their preferred alternative (Kim 2011).

Ride Connection, Portland, Oregon

The National Center on Senior Transportation has highlighted the outreach efforts of the Ride Connection organization in Portland, Oregon, as an example of "best practices" for disseminating transit information to older adults. This comprehensive initiative involves the placement of informational transit boards in convenient locations, the creation of Riders Clubs, and the use of Ride Ambassadors to encourage more transit use by older riders.

Planning for Older Transit Riders

Planners who want to promote public transit services for older riders can look to the many recommendations made by Rosenbloom (2009), the Coalition for Smarter Growth (McAuliff 2014), and the Beverly Foundation (2004). The following sections describe various transit-related issues pertinent to older transit riders and planning strategies and policies to address them.

Increased Safety and Security

Older transit riders, especially female ones, need to feel safe when using these services. Closed-circuit television cameras, a more visible police presence, and the use of volunteer escorts can help riders feel safer. Transit staff or conductors available to provide assistance and to answer questions are also important, especially as transit systems employ more fully automated fare systems at stations. Sheltered, clean, and well-lit bus shelters and stations with adequate seating can also make users feel safer.

Rider Training and Real-Time Travel Information

Many older riders may be afraid of getting lost when using public transit services, and rider training and details about routes, fares, and schedules are priority needs for older adults. Providing older riders with real-time information about when the next train or bus will arrive can also reduce some of these fears.

Custom Services

According to Rosenbloom (2009, 36), "transit operators may need to provide more customized services more directly linking residential concentrations of older people to the destinations to which they want to travel and at the hours they need to travel, often outside the traditional peak periods, and sometimes at night." She also suggests that the transit vehicles providing such services might be smaller scale, with more driver assistance and with some flexibility to deviate from routes or to drop passengers off anywhere along the route, rather than only at fixed stations. She notes that the provision of such custom service is likely to be considerably more expensive than current service, but it might not be as expensive as providing more limited, special demand-responsive paratransit services to more users (which, in 2007, cost an average of $36 per one-way trip in the 50 largest transit systems).

Subsidizing Services

Creating a discounted fare structure for older transit users and establishing subsidized voucher programs for licensed private taxis (or for largely unregulated emerging private jitney services, such as Lyft and Uber) in communities without good public transit services might also greatly increase the mobility of those older adults without access to cars or who no longer drive. The Coalition for Smarter Growth notes that a number of communities—including San Francisco and Arlington, Virginia—have set a goal that wheelchair-accessible cabs make up five percent of their private fleets; communities may want to help subsidize ADA-compliant taxi conversions to promote these objectives (McAullif 2014). Encouraging car-sharing services (such as Zipcar) to locate vehicles near retirement communities or senior centers might also help increase the mobility of those older adults who can still drive but who cannot afford to purchase or maintain their own automobiles.

Mobility Management Best Practices, National Center on Senior Transportation

The National Center on Senior Transportation has also identified the mobility management and counseling program of the Jewish Family and Children's Services of Minneapolis; the myride2 program of the Area Agency on Aging 1-B in Southfield, Michigan; and the United We Guide initiative of the Florida Department of Transportation as comprising some of the nation's "best practices" in mobility management. Appendix A provides links to more information about these programs.

OLDER CYCLISTS

Bicycling—by providing moderate, nonimpact, outdoor exercise—offers many health benefits to older adults. But, because of declining physical resiliency as people age and the resultant greater risk of harm from falls and accidents, promoting safer bicycling becomes a higher priority issue for older cyclists. These safety issues are complicated by some of the physical constraints of aging, including reduced muscle mass and joint flexibility, slower reaction times, and often more limited vision, which can make it harder for older cyclists to adequately assess adjacent traffic hazards and road conditions. Coupled with other safety training issues (such as poorly adjusted helmets, the improper adjustment of seats and handlebars, and riders not following the rules of the road), having physically impaired older cyclists safely share the road with cars, buses, other bike riders, and pedestrians can pose quite a challenge (Hayes, Henslee, and Ferber 2003).

Bicycle Safety Issues

Although most bikes are ridden on streets, research on older-adult cyclists (age 70 and older) in Denmark shows they have a significantly stronger preference for riding on dedicated cycle paths and using signalized crossings than do younger (ages 40 to 49) cyclists (Bernhoft and Carstensen 2008). In fact, the existence of a bike path was the major route determinant for over half of the older cyclists, with use of a road with minimal traffic an important factor for about half the older riders; younger adult cyclists favored the fastest or most direct route. Older road users also tend to follow the rules of the road more than younger adult riders do (for example, by stopping at red lights or stopping fully before making a left turn), and their compliant behavior tends to be influenced more by whether an action is illegal, though an increased feeling of safety was also mentioned as a justification for following safe biking rules. Another study finds differences between younger and older cyclists in Canada around cycling infrastructure: secure bicycle parking at a destination was more important to younger cyclists than showers, and they value secure parking significantly more than do older cyclists, suggesting that bicycles might be more significant possessions for younger riders (simply because they may tend to own fewer things than older cyclists) (Hunt and Abraham 2007).

A Swedish study of pedestrian and cyclist crosswalks looking at crash data finds that slower automobile speeds and longer stopping distances from crosswalks or cycle crossings reduce collisions, primarily by increasing sight distances for drivers (Leden, Garder, and Johansson 2005). In addition,

one-way bike lanes on streets are safer, since drivers do not expect cyclists to approach them from "the wrong direction," but bike lanes are not needed on streets with low speed limits. New street designs used in Sweden to promote cycling—called cycle streets—take advantage of some of these findings. Cycle streets are specially marked roads where traffic calming is used so that cyclists can make use of the entire street, with cars having to stay behind them, giving cyclists a strong priority over motorists.

Planning for Older Cyclists

Grade-separated bike paths and sound bike-lane design are probably the best approaches to protecting the safety of older cyclists. The FHWA's (2009) guidelines recommend that bike lanes be four to five feet in width, depending on whether the streets are curbed or whether they have curbside parking, and that multiuse paths be a minimum of 10 feet in width. Given the preferences of older cyclists, the following planning strategies might be considered.

Dedicated Bike Paths and Wider Bike Lanes

Surveys of cyclists suggest that with proficiency comes flexibility—experienced cyclists do not mind sharing roads, mixed use greenways, or bike lanes as much as inexperienced ones do, and younger cyclists are more concerned about the length of the journey and not its bike-related facilities. Older cyclists, in contrast, have a clear preference for bike paths, which, like fixed-rail transit, ought to connect a community's major destinations and activity nodes (such as central business districts, schools, park facilities, and shopping centers) if they are to be used for personal travel rather than only for recreation.

The routing and interconnection of community bikeway systems—both bike lanes on roadways and dedicated bike paths—so that community centers are accessible from areas and facilities serving large numbers of older adults are therefore critical factors in promoting cycling as a viable transportation mode for older cyclists. Although more expensive than simply painting bike lanes on roads, providing protected bike lanes in such locations or on higher volume roadways may also be a feasible strategy for encouraging biking and improving bicycle safety for all cyclists, and not just for older adults. Having an adequate number of secure bike racks at destinations is also an important element of the bikeway system.

Since older cyclists may face significant physical constraints, especially slower reaction times and increased risk of injury from falls, the design of dedicated bikeways near facilities serving older adults should accommodate these constraints by giving older cyclists more room (and clear sight lines to give them more lead time) to maneuver around pedestrians and slower cyclists sharing the same path. Thus, it makes sense to employ bike lanes and paths with widths of at least five feet for each lane in areas with concentrations of older adults (and also near the destination activity nodes to better accommodate the higher volume of bike traffic around such areas); multiuse paths might be expanded from 10 feet to 12 feet in width in such locations. Wider lanes can also better accommodate less traditional human-powered transport, such as tricycles (either upright or recumbent), which might be favored by more fragile older cyclists because of their inherently greater stability when compared to bicycles.

As with pedestrian facilities, dedicated bikeways require clear signage, clearly visible striping, and continual maintenance to minimize the risks of collisions and falls. Hard paving, such as asphalt, provides older cyclists with a more stable riding surface than softer surfaces, which may be more susceptible to ruts and erosion. Gradual grades and long sight lines also enable older cyclists to better anticipate potential hazards earlier while cycling. Most states treat bicycles and motor vehicles similary with respect to compliance with the rules of the road, where cyclists are given parity with automobiles despite the clearly disparate risks of injury in any collision between a car and bicycle. Signage giving bicyclists priority at crossings helps older cyclists feel safer using the facilities. For critical bike crossings—especially those near activity centers, retirement housing, and other facilities for older adults—treating cyclists as pedestrians might make more sense, by explicitly requiring automobiles to yield to cyclists at marked bicycle crossings or even by installing bicycle crossing signals.

Lower Speeds and Segregation from Cars

Any falls at higher speeds and collisions with automobiles are likely to be catastrophic for less resilient older cyclists. Where older cyclists must share the road with motorists, reduced automobile vehicle speeds, clearer separations of bike lanes from automobiles (including the provision of protected bike lanes), and traffic-calming measures (such as speed bumps) can help older cyclists feel safer while biking. Separation from automobiles might include parked cars as well as those being driven, given the slower reaction times of some older cyclists. For example, streets with bike lanes that are located near residential concentrations of older adults might have the bike lane sited next to the curb, with parallel parking prohibited on the lane-marked side of the street to reduce the risks of older cyclists being accidently "doored."

Rest Areas

Although cycling is excellent exercise, many older cyclists lack the strength and physical capacity to cycle continuously for long times or distances. Rest areas located every mile or so sited off the bike lanes—with benches, shade, water fountains, and space to park a bicycle or two—are useful amenities for a dedicated bike path system. These would be appreciated not only by older cyclists but also by families with children and other bike path users. Benched rest areas would be especially useful on multiuse paths shared by pedestrians and bicyclists.

Ateaze Cycling Seniors, Ateaze Senior Center, Baltimore, Maryland

One way to improve bicycle safety for older cyclists is to have senior centers organize group ride events for their members. A larger group of riders is certainly more visible to motorists than a single bicyclist, reducing potential collision risks, and pre-ride safety checks by the senior center staff organizing the rides can ensure that the older riders' bicycles are adjusted properly to conform to their dimensions and are in good mechanical condition. These checks also ensure that bikes have appropriate safety features (such as lights, bells, and reflectors) installed. The ride organizers can also make sure that all of the older riders are using properly adjusted bike helmets and safely following the rules of the road while biking; this behavioral monitoring can reduce some of the potential injury risks for older riders. The Ateaze Senior Center in Baltimore, a facility run by Baltimore County's Department of Aging, has facilitated organized group rides for its older adult members since 1991. The Ateaze Cycling Seniors group organizes "moderate" and "casual" bike tours several times a week (distinguished by both their distance and their terrain), and it also offers biking clinics for those older riders who might need to "brush up" on their skills.

RECOMMENDATIONS FOR ADDRESSING MOBILITY AND AGING IN COMMUNITY

There is a wide, if not bewildering, range of issues associated with the different transportation modes and programs that can be employed to increase the mobility of older adults. Also diverse are the various public, nonprofit, and private entities responsible for planning, delivering, and improving these different mobility services for older adults. For example, pedestrian improvements might be the responsibility of a municipal public works department, while the installation and maintenance of traffic signaling, street lighting, bike lanes, and road signage are the responsibility of a local highway or road department. The same fragmentation can occur with the provision of transit and paratransit services, which are often the responsibility of a regional transportation authority, while the licensing of cabs and oversight of entrepreneurial cellphone- or internet-directed private driving services (Uber, for example) are the responsibility of a consumer affairs department or a city council. Finally, volunteer driver or escort programs are often the responsibility of churches, retirement communities, or senior centers.

All of these entities can provide some type of transportation service to older adults, and many of their programs may either overlap each other or leave gaps in services and access that are not adequately addressed by the community or its local officials. Determining which of these services are most effective or efficient in meeting the needs of a specific older adult can be a challenging process, especially with older adults living in very different types of settlements. What is an optimal mix of mobility services to an older adult living in a large, dense city might not work very well in a rural village with sparse and infrequent bus service, for example. Clearly, there is no "one-size-fits-all" approach to providing enhanced mobility for all older adults—though assuring strict ADA compliance in the design and operation of public facilities and infrastructure can help remove many mobility barriers for everyone.

One strategy to help communities choose among the various mobility options for older adults and best accommodate community conditions and user needs is to establish a mobility management program and hire a mobility management coordinator. According to the Coalition for Smarter Growth, mobility management systems are characterized as "programs that maintain a comprehensive inventory of all transportation services for older adults and people with disabilities in a jurisdiction, and help to coordinate and refine them" (McAuliff 2014, 49). A mobility manager can help coordinate a variety of transportation services offered by different service providers to meet an individual client's needs, often through a "one-call" counseling process. The coalition cites the mobility management program of Montgomery County, Maryland, and the MY RIDE Dallas program of Dallas County, Texas, which provides one-on-one travel counseling, as exemplary mobility programs. Many other examples of best practices can also be found on the National Center for Mobility Management's website (http://nationalcenterformobilitymanagement.org/).

Montgomery County's mobility management program was created using a six-step process, and this developmen-

tal process can provide useful guidance to other communities considering adopting similar strategies for older adults (McAuliff 2014):

1. Conduct a survey and overview of public transit to assess how transit is used.
2. Form collaborative councils of stakeholders to identify issues and strategies.
3. Conduct focus groups and administer public surveys to older adults as part of a community outreach program.
4. Create a centralized call center.
5. Develop a strategic plan to detail the mobility management system's operations, purposes, and goals.
6. Hire a mobility management coordinator to implement the program.

These steps can certainly be tailored to meet local needs and resources, but the creation of a comprehensive, inclusive, and integrated mobility program will help coordinate multiple modes of travel in order to best meet the social, shopping, medical, and recreational mobility needs of those older adults who choose to age in their communities. This also allows older individuals to use existing or enhanced transportation services offered by different public, private, and nonprofit providers. Table 3.2 summarizes the various strategies and approaches cities and regions can use to improve the mobility of older populations.

TABLE 3.2. MOBILITY RECOMMENDATIONS

Approach community transportation planning within the broad context of mobility, accessibility, convenience, safety, and affordability—in addition to promoting efficiency.
Engage with all ongoing transportation and mobility planning efforts and stakeholders throughout the community to better coordinate efforts and leverage resources.
Consider the unique and interconnected mobility needs of different user groups, including pedestrians, cyclists, motorists, and transit riders.
Acknowledge the different and evolving mobility needs and challenges of different community members—including but not limited to older adults—in mobility planning.
Ensure community land-use planning that is coordinated with older-adult mobility needs through zoning enhancements to support the logical location of older-adult housing and services near transportation and mobility infrastructure.
Commit adequate resources for ensuring regular and timely maintenance of all active transportation infrastructure to help promote safety and usage, including the creation of a mobility management program and the hiring of a mobility manager.
Consider the redesign of community roadways using complete streets strategies that support the mobility needs of all users groups and the evolving needs of older adults.
Acknowledge the reality of older adult drivers and support their evolving competencies and needs through enhanced roadway design and appropriate visibility and nonglare lighting standards.
Consider older adult drivers' needs by establishing mindful site planning and parking standards in appropriate locations.
Promote pedestrian safety throughout the community using traffic-calming techniques, improved signalization, and the enhanced design of pedestrian facilities—in addition to traffic and driver safety measures to improve the mobility of older drivers.
Support and promote increased older-adult usage of public transportation or transit by providing more custom services, rider training, and real-time information.
Develop an integrated community bicycle network that includes dedicated bike paths, wider bike lanes, lower speeds, segregation from cars, adequate rest areas, lighting, and wayfinding signage and that discourages faster bicyclists from using multiuse paths.

CHAPTER 4

THE PUBLIC REALM AND PUBLIC SERVICES TO SUPPORT AGING IN COMMUNITY

The ability of cities and communities to support aging in community will depend on more than merely providing an adequate range of housing options for older adults and a transportation network that allows individuals to access amenities and community services. How cities and communities address the public realm and provide public services speaks a great deal about their commitment to aging supportiveness. This chapter will discuss some public realm and public services issues relevant to planning and operating aging-supportive cities and communities, and it will highlight promising practices and programs for planners to reference in addressing their own local issues and challenges.

Many planners and designers refer to a spectrum or hierarchy of spaces, from public spaces through semi-public and semi-private spaces to private spaces. The term *public realm* in this chapter refers to a variety of outdoor spaces, including streetscapes, parks, plazas, civic gathering spaces, waterfronts, and outdoor venues. This broad term also includes enclosed public buildings and facilities. These spaces within a community are considered collectively, regardless of who actually owns and manages them. *Public services* refers to the types of fundamental services that residents of cities and communities typically expect to be provided by public-sector entities. The nature of these spaces and services can contribute greatly to residents' perceptions about livability and their ability to age in community. If public realms, for example, do not feel safe, accessible, and welcoming, people will avoid them. For older residents in particular, these limitations can greatly affect levels of social and community engagement.

While much of the open space within a city or community is privately owned and operated, public-sector agencies own, maintain, and oversee other key elements of the public realm, including many roadways and sidewalks, parks, municipal facilities and spaces, and portions of most waterfronts and open space venues. The public sector also plays a significant and evolving role in the provision of public and human services, and the nature of those services plays a substantial role in the resulting aging supportiveness of these cities and communities. As these populations grow and change, the service roles and realities of providing these services will change as well, with a combination of private, nonprofit, and hybrid service providers also playing important roles in basic service provision and the ability of older adults to successfully age in community.

Addressing the needs and desires of the growing older-adult population—who are living longer and healthier than earlier generations and are more likely to be aging in community—requires a re-examination of the role of cities and communities. The increasing emphasis on aging in community, the shift from an institution-based health care delivery model to a home- and community-based care model, and the economic need for government at all levels to provide essential services in more efficient ways have fundamentally changed the demands on cities and communities. The public realm and public services, in turn, are evolving as planners and public officials seek creative and cost- and resource-efficient ways to support aging in community in these two realms.

PLANNING THE PUBLIC REALM AND PUBLIC SERVICES FOR AGING COMMUNITIES

With this context in mind, there are a number of considerations that planners should consider as they plan, operate, collaborate upon, and evaluate public realm and public service strategies to develop aging-supportive cities and communities.

Planning and Public Health

While planning and public health historically have shared a focus on urban reform, the professions have diverged over time. Rather than more directly addressing issues related to

health and safety, planners have focused more on areas such as land use and transportation. Public health professionals then took the lead on addressing health and safety concerns. Today, as community health concerns increasingly center on chronic disease and safety, public health specialists and city and community planners are increasingly realizing that they cannot operate in isolation any longer. The decisions public officials make around land use, community design, and transportation affect local air quality, water quality and supply, and traffic safety, and ultimately the physical and mental health of residents. These decisions are linked to some of the most intractable public health outcomes, including adult and childhood obesity, inactivity, and chronic disease.

An American Planning Association (APA) (2011) survey found that the links between planning and public health could be strengthened. Only 27 percent of respondents reported that their jurisdiction's comprehensive plan explicitly addresses public health, and only three percent reported that their sustainability plan looks at public health. Local health departments generally were not involved or had little involvement in the development of public health components of comprehensive plans or sustainability plans. However, of those plans with public health components, aging was the 10th most cited topic.

Some communities and regions have learned that making linkages between planning and public health initiatives and programs provides better opportunities for building the types of coalitions that can foster political and community support. Not working in professional or institutional silos can also help communities more efficiently leverage scarce financial resources to further multiple objectives. Cities, counties, and communities are working to develop better models to deliver health care to an increased number of older adults, the great majority of whom are living independently throughout their communities. These jurisdictions are working in partnerships with private-sector entities, consumers, and other stakeholders to plan services such as adult day care, chronic disease self-management programs, and other programs to support the ability of older adults to healthily age in community. As aging communities grow and their needs continue to increase, developing these planning and public health links will become even more crucial.

Aging Readiness Plan, Clark County, Washington

Clark County is located in southwest Washington, just north of the Columbia River and Portland, Oregon. The county sought citizen input about how to prepare for imminent demographic changes by initiating the Aging Readiness Task Force. The board of county commissioners appointed the task force in 2010, and it was charged with assessing the county's capacity to serve a growing number of older residents who will likely face challenges to their independence and quality of life. The task force focused on healthy communities, housing, transportation and mobility, supportive services, and community engagement. The aging readiness plan, finalized in 2012, explores each of these elements, identifies challenges, and provides strategies and recommendations to improve the community's capacities (Clark County 2012).

The Healthy Communities section of the plan examines the following elements of the built environment that research shows can improve the physical and mental health of residents (Clark County 2012, 2):

- Layout, design, connectivity, and maintenance of sidewalks, roads, bicycle lanes, paths, and trails
- A combination of homes, stores, businesses, institutions, industries, and community and cultural facilities
- Compactness, density, and accessibility of built areas
- Access to recreational facilities and green spaces
- Safe, comfortable, and attractive streets, public spaces, buildings, and structures
- Healthy and resilient natural environments and biodiversity

By framing aspects of the built environment and public realm as public health issues, the plan links planning and the ability of residents to age healthily in Clark County.

Senior Farmers' Market Nutrition Program, Reno, Nevada

Several states and communities have developed senior farmers' market nutrition programs that provide low-income older adults with transportation and vouchers to be used at farmers markets. The Senior Farmers' Market Nutrition Program in Reno, Nevada, provides low-income older adults with coupons that can be exchanged for eligible foods at participating Nevada farmers' markets and roadside farm stands. The purpose of the program is to increase the production, distribution, and consumption of fresh, locally grown fruits and vegetables and to supplement the nutritional needs of Nevada's older adults.

Fairfax County, Virginia

Fairfax County, adjacent to Washington, D.C., is one of a number of counties currently working with local health departments and a variety of private entities to develop improved processes that give older adults better access to the broad range of services available in the region. The county is partnering with a private health-care system to operate a

Program of All-Inclusive Care for the Elderly (PACE) site at a local adult day health-care center. By working systemwide, the Fairfax County Health Department hopes to enhance collaborations with various community-based health-care and housing partners.

Health Impact Assessments

Health impact assessments (HIAs) are an evaluation process to help "policy makers take advantage of these opportunities by bringing together scientific data, health expertise and public input to identify the potential—and often overlooked—health effects of proposed new laws, regulations, projects and programs" (Pew Charitable Trusts 2015). HIAs are somewhat similar to the environmental impact assessment process that has been in practice for 50 years; they offer practical recommendations for ways to minimize risks and capitalize on opportunities to improve health. HIAs give federal, state, and local legislators; public officials; and other decision makers the information needed to advance smarter policies that will lead to safe, thriving communities. HIAs can also help to assess the potential health impacts of proposed projects or programs on specific or vulnerable populations, such as older adults.

The value of HIAs to city and community planning is becoming more apparent. A recent evaluation of HIAs in the United States outlined the numerous ways they have influenced the planning process (Rhodus et al. 2013):

- Contributed directly and concretely to the decision-making process, meaning decisions would have been markedly different without the HIA
- Altered the trajectory of policies or plans in ways intended to improve health or mitigate potentially adverse health consequences
- Influenced changes beyond the decision under consideration, resulting in the incorporation of health objectives into plans, policies, and programs established by nonhealth agencies
- Showed key stakeholders the health effects of nonhealth policies and programs
- Helped build consensus among decision makers and their constituents and intensified cross-sector working relationships
- Increased the extent of community involvement in the decision-making process

But, according to survey findings, much needs to be done to integrate the use of HIAs into planning practice (American Planning Association 2011a). Survey respondents indicated HIAs were used in only 3.7 percent of comprehensive plans and 11.1 percent of sustainability plans, while 47 percent of respondents doubted or did not know if any health assessment tools were used at all to develop their plans. Where HIAs are being used, their primary role is to evaluate the public health impacts and benefits that may likely result from specific proposed physical development or redevelopment projects. HIAs can help assess the potential impacts and benefits to older adults of particular projects and the contributions to a community's aging supportiveness. HIAs are not limited to infrastructure development plans and proposals; they can assess and allow enhancements to a range of programmatic improvement plans and programs. Some cities and communities have also begun using programmatic HIAs to evaluate proposed or existing programs, such as nutrition and smoking cessation programs.

Twin Cities Army Ammunition Plant Site Redevelopment Health Impact Assessment, Arden Hills, Minnesota

Arden Hills, Minnesota, is approximately 10 miles northeast of Minneapolis in the Twin Cities metropolitan area. The city conducted an HIA in 2010 to address the public health impacts of the proposed redevelopment of the Twin Cities Army Ammunition Plant site of 2,370 acres. The HIA participants collaborated in small groups to identify potential positive and negative impacts of the redevelopment proposal and to prioritize approaches to mitigate negative impacts and maximize positive impacts. Based on the identified impacts, participants proposed a set of changes to the proposal, which included the following recommendations (Forsyth et al. 2010):

- Ensure a mix of housing types and prices.
- Provide trails within the site and that connect to other regional systems.
- Increase the site's transit accessibility.
- Use green building techniques.
- Design "complete streets" for all users and modes.

Some of the HIA recommendations appear in the final site plan that the city recently approved.

Adams Park Improvement Plan, Omaha, Nebraska

In 2007 a group of business and community leaders developed a plan to improve Adams Park, a 68-acre green space next to the birthplace of Malcolm X in North Omaha. They hoped the park would benefit residents, attract visitors, and encourage development and investment in the surrounding neighborhoods. The Douglas County Health Department (DCHD) was also eager to help revive Adams Park. To learn

how it could spur much-needed health improvements, the DCHD conducted an assessment of the Adams Park plan. The DCHD collected and analyzed data on health, demographics, food access, crime, traffic crashes, and land use, and it interviewed experts and reviewed scientific research to understand how changes to Adams Park could affect community health.

The HIA showed that the Adams Park plan could greatly improve health in North Omaha. The plan's urban farming and gardening center would give local residents greater access to affordable fruits and vegetables, and walkers and bikers using proposed trails and park entrances could easily access the park and boost their physical activity levels. The assessment showed that the plan could even influence health beyond park borders. It recommended that nearby schools and groups use the field, pool, and other facilities to offer after-school and summer activities for local children. Research in other cities showed that additional benefits of community gardens are increased property values and reduced crime within a quarter-mile radius (Centers for Disease Control and Prevention 2013).

Wayfinding

Wayfinding refers to the process of finding one's way from place to place within a community or neighborhood, and it is closely linked to walkability, accessibility, and connectivity. Typically thought of as visual signage and information system infrastructure, wayfinding may be viewed as having effects at both the individual and community levels. At the individual level, good wayfinding can enhance access to goods and services; make walking, cycling, and transit use easier and safer for residents and visitors; and help people become engaged with their communities. A well-designed wayfinding program can support the abilities of a wide range of users—including older adults and others with diminished perception skills and related needs—to successfully live in and navigate their communities.

From a broader community perspective, good wayfinding helps support tourism and economic and commercial vitality; facilitates efficient and safe use of sidewalks, roadways, and public transportation; encourages livable neighborhoods; and supports community public-health programs. Many communities already have developed and implemented a range of wayfinding programs that address specific goals, most often related to downtown economic development or tourism. But a growing number of communities are addressing integrated wayfinding to support both the needs of their residents as well as the needs of visitors.

Wayfinding Guidebook

The Centers for Disease Control and Prevention's (CDC) Healthy Aging Program supports the CDC Healthy Aging Research Network (HAN), which is coordinated through the University of Washington and includes seven member and affiliate universities. The network has worked on the issue of wayfinding with a number of stakeholder partners and the Easter Seals Project ACTION (Accessible Community Transportation in Our Nation). The CDC-HAN has published *Pathways to Better Community Wayfinding* to help planners and other community stakeholders assess their own wayfinding assets and needs and consider action steps to improve their wayfinding programs (Hunter et al. 2013). It has also developed a *Wayfinding Assessment Guide* (CDC-HAN and Easter Seals Project ACTION 2012) as a pocket-sized companion piece. The guide can be used by any community stakeholder to participate in a community wayfinding evaluation effort.

Parks and Public Spaces

Most cities and communities have an assortment of publicly owned, maintained, and operated open spaces. Parks, public squares, plazas, waterfronts, and forest preserves are common and play important civic roles. But less obvious open spaces such as streetscapes and spaces in public, educational, and civic buildings can also play important community-building roles. In addition, most communities contain an array of privately owned open spaces such as parking lots, business and industrial park yards, and cemeteries. One strategy is to link programmatically, and even physically, a number of public and private open spaces in order to develop community-wide open space systems. A number of cities and communities around the country are also taking the lead in crafting policies, programs, and resources designed to maximize the roles that their existing parks and public space infrastructure can play in the aging supportiveness of communities.

Age-Friendly Parks, Philadelphia, Pennsylvania

Laying the Foundation for an Age-Friendly Philadelphia: A Progress Report (Philadelphia Corporation for Aging 2013) describes the findings of a 2010 survey indicating that, despite Philadelphia's extensive and famed park system, 72 percent of older adult respondents reported that they had not gone to a public recreation facility within the past year. This was the case even though just one percent of respondents said that their homes were not near a public recreation facility.

Figure 4.1. Group exercising on the Benjamin Franklin Parkway in Philadelphia (Fairmount Park Conservancy and Philadelphia Corporation for Aging)

The Philadelphia Corporation for Aging, the Fairmount Park Conservancy, and the City of Philadelphia Parks and Recreation partnered to find ways to encourage more park usage by older adults (Figure 4.1). They developed an "Age-Friendly Parks Checklist" that includes features to help increase park usage, such as shaded areas, railings along stairways, wide pathways that can accommodate wheelchairs, clean bathrooms, and design and services that encourage safety (Philadelphia Corporation for Aging et al. 2011). The checklist has informed the renovation plans at two areas within Fairmount Park and resulted in the incorporation of a new parks and park facilities accessibility assessment tool. It has also been used for a number of community education, health promotion, and educational activities, and it serves nationally as an example of a best practice.

"Third Places" and Social Capital

Many planners are familiar with third places, or third spaces, and the important role they play in the development of a sense of place and a community's livability. In *The Great Good Place*, Oldenburg (1989) refers to people's homes as first places, workplaces as second places, and public and semi-public meeting places as third places, where more informal

and creative interactions occur. He identifies the characteristics as representative of these spaces:

- They are free or inexpensive.
- They are highly accessible, and within walking distance for many.
- They involve regulars who habitually congregate there.
- They are welcoming and comfortable.
- Both new and old friends are found there.

The notion of social capital refers to the collection of familiar human networks, organizations, and physical spaces that link individuals to their environments; third places are key elements in developing social capital in a community. As communities continue to age and the number of older adults wishing to age in community increases, aging-supportive communities will be those that nurture third places and the development and maintenance of social capital.

Senior Centers

Senior centers can either be part of multigenerational community centers, or they can be age-specific centers that play an important role in providing formal and informal social services to older adults. A study in Montgomery County, Pennsylvania (2006), concludes that the baby boomer generation would be reluctant to use the services available at traditional senior centers and other sites providing aging services because they would not see themselves as the older adults in need that they perceive are the target market of these centers. The study noted that the interest of baby boomers in health and wellness services, retirement, and caregiving presented many potential opportunities. Partnerships between government, business, nonprofits, aging services organizations, and civic groups could be very fruitful if participants realized and acted on common opportunities to connect with the fast-growing older-adult population. The report offers several dozen recommendations that fall into four areas:

1. **Reorganization and repositioning:** The existing senior centers need to reorganize and reposition themselves and rethink their program offerings to attract new baby boomer users.
2. **Service paradigm changes:** Instead of delivering services to accommodate clients' deficits, the centers must provide older adults with opportunities and adopt an "asset-based" approach by offering health and wellness programs in collaboration with local partners.

Figure 4.2. Exercise station at senior playground in Springfield Township, Ohio (Photo courtesy Ed Suba Jr./Akron Beacon Journal)

3. **Comprehensive planning:** Senior centers need to engage in comprehensive planning on countywide, regional, and agency-specific levels in order to build capacity for the new service model.
4. **Establishment of partnerships:** Partnerships with a wide range of local for-profit and not-for-profit partner agencies and organizations should be a key element of all future senior center activities.

Boyd Esler Senior and Community Center Older Adult Playground, Springfield Township, Ohio

With the increased attention on healthy aging and the prevention of falls by older adults, some parks and recreation centers around the United States have developed playgrounds specifically targeted towards older-adult users, a model much more prevalent throughout Europe and Asia. The Boyd Esler Center in Springfield Township, Ohio, used block-grant funding to open a facility with eight pieces of low-impact athletic equipment designed especially for older adults to help users maintain flexibility, balance, and range of motion (Figure 4.2).

Joint Use of Public Facilities

As fiscal belts tighten and community needs evolve, communities and public agencies around the country are creatively using school buildings and grounds and other public spaces as part of a broad community aging-supportiveness strategy. Joint-use strategies can help serve the growing population of older adults and facilitate intergenerational connections, cut costs for municipalities and school districts, create opportunities for physical activity, and support households and indi-

viduals facing financial hardships. Joint use can also address public health and service delivery issues by breaking down functional and institutional silos and integrating services. Schools, in particular, are often centrally located in communities and act as social focal points; they can be important components of creative and successful joint-use strategies. The implementation of a formal facility joint-use agreement is generally recommended to clarify responsibilities and protocols (Israel and Warner 2008).

Gaylord Community Schools, Gaylord, Michigan

After two unsuccessful attempts to construct a new school building, the school board in rural Gaylord, Michigan, (population 3,600) took the approach of incorporating broader community needs and desires into the project. The board proposed a facility that includes child care, a community health-care clinic, older-adult activities, a performing arts center, and a gymnasium and classrooms designed for shared community use. The $25 million bond proposal fostered a broad sense of community investment and gained the support of Gaylord residents. The jointly used school gave Gaylord its first performing arts center, which has become a place where students and community members regularly interact (Warner, Homsy, and Greenhouse 2010).

Tactical Urbanism

Tactical urbanism refers to a set of simple, relatively inexpensive, and quick or temporary fixes for identified community problems. These can include approved interventions, such as transitioning neglected roadway medians or vacant lots to create gardens; locating popup food, crafts, or commercial kiosks in community zones needing activation; temporarily or permanently converting parking spaces into impromptu parks; or building and placing public street furniture in neighborhoods that lack it. But tactical urbanism can also refer to nonapproved guerilla actions: replacing blank walls or commercial billboards with anonymous street art or public wish lists, mounting official-looking "coming soon" signs for hoped-for parks and subway stations, adding fake painted crosswalks at busy intersections, and adding fake regulatory signage "enacting" desired policy changes.

Tactical urbanism is intended to promote small-scale, community-based livability enhancements rather than leaving community members solely reliant on public-sector planning and development programs. It has, however, encountered some resistance because of the perception that these actions benefit younger, newer, more educated community residents at the expense of older or more tenured residents. But the spirit behind tactical urbanism and its strategies can help enhance community aging supportiveness by providing the types of public realm improvements that make open spaces more accessible and provide valuable services for older adults, such as access to fresh produce and gathering spaces for social engagement. Creative planners and public officials could establish collaborations to allow such activities to be scaled up and become notable components of aging-supportive communities.

People St, Los Angeles, California

People St is a program of the City of Los Angeles Department of Transportation under which eligible community partner organizations can apply for approval to create plaza, parklet, or bicycle corral projects that enhance the quality of life in

Figure 4.3. People St installation, Los Angeles (LADOT / Jim Simmons)

neighborhoods (Figure 4.3). Since the beginning of the program in 2011, a number of projects have been implemented. While assessments are ongoing, many of these small-scale projects are being lauded for enhancements to the quality of life of users, and some indications suggest that nearby retail sales have also benefitted (Sideris et al. 2013). Additional projects are being promoted in part for the social and physical fitness benefits for older adults.

Shifting Roles of Community Workers

The growing number of older adults—overall and those aging in community—together with the decrease in the financial resources of cities and communities has led to the search for innovative and fiscally efficient ways to provide basic human and health care services. Helpline operators, emergency service workers, first responders, and other staff from community organizations and public agencies are playing more enhanced service-provision roles and are increasingly acting as connections to older adults needing services. This has resulted in programs around the country that train employees to work in these capacities with aging populations.

City of Chicago Department of Family & Support Services/ Senior Services, Intensive Case Advocacy and Support Program

Partly in response to the high number of isolated older adults among the 465 people who died during Chicago's weeklong heat wave of 1995, the city developed and instituted the Intensive Case Advocacy and Support (ICAS) program (Hersh-White et al. 2012). As part of the ICAS program, the city trained over 30,000 first responders, utility workers, mail carriers, social agency staff, and others to identify older adults they might encounter in the course of their work who might be abused or self-neglecting and to report this information to the Department of Family & Support Services. After a well-being check done by either the department or the Salvation Army, a determination is made as to whether the client needs ICAS services such as intensive casework, benefits access, and service coordination. If such services are needed, the city refers the client to a delegate agency to conduct a series of actions: remove the older-adult victim from immediate danger; perform a comprehensive assessment, including medical, social, and risk/safety evaluations; refer the older-adult victim to the appropriate agency, program, or service for follow-up and continued assistance; and monitor the subsequent plans of care to ensure appropriate service delivery.

ICAS represents the first comprehensive and networked program to use Chicago's human capital assets to address older adults' emergency service needs. The ICAS team responded to 1,225 at-risk older-adult situations in 2011, of which 78 percent required interventions, 26 percent were referred for care coordination interventions and services, and 20 percent required investigations of elder abuse. These numbers represent significant increases over previous years.

Project CARE (Community Action to Reach the Elderly) Program, Encinitas, California

Project CARE is run out of the Encinitas Senior Center, and it serves as a "safety net" of services for older and disabled adults in the city, many of whom are living independently. Older adults may choose from a variety of free services designed to help them remain living safely in their own homes. Programs include the following:

- **Are You Okay?:** Daily computerized calls, which if unanswered receive follow-up
- **Gatekeepers:** Meter readers and trash collectors watch for signs of distress (e.g., newspapers piling up) and follow up if needed
- **Home Safety Checks:** A crime prevention specialist from the sheriff's office checks homes for security and provides 911 telephone stickers
- **Postal Alert:** Mail carriers follow up if they see mail not picked up for two days
- **Vital for Life:** Magnetized medical information to place on a refrigerator, which would provide assistance to fire, sheriff, or emergency responders
- **You Are Not Alone:** Check-ins by volunteer deputy sheriffs

Project Independence, Town of North Hempstead, New York

Project Independence began in 2004 as a townwide aging-in-community initiative when North Hempstead recognized that much of the town technically qualified as a naturally occurring retirement community under New York's definition. The program has three essential components: (1) coordination of programs by a local government committed to older adults; (2) extensive partnerships throughout the nonprofit, business, and public sectors; and (3) active broad-based older-adult involvement on advisory committees. North Hempstead has a widely used 311 system that fields, responds to, and tracks approximately 150,000 calls annually and serves as the port of entry for

most Project Independence users. The town joined its 311 program to Project Independence with impressive results; the merger has enhanced older adult residents' knowledge of and access to a range of transportation, social work, health care, household assistance, fitness, technology, and volunteering programs and resources.

Disaster Readiness and Response

Community aging supportiveness includes readiness for and responsiveness to natural and other disasters. Planners and public officials should participate in and inform local and regional disaster-planning efforts, and they should view such efforts partly through an older-adult lens. Each year natural disasters and major emergencies place unique challenges and strains on local communities and their capacity to respond. Experience from recent natural disasters (such as 64 percent of the confirmed fatalities from Hurricane Katrina in 2005 being people 65 years or older and 47 percent being 75 or older) confirmed that older adults are particularly vulnerable to them (Jonkman et al. 2009). In the event of an emergency or disaster, area agencies on aging are particularly crucial due to their extensive experience meeting the needs of older adults and their established role as trusted community resources.

In a 2008 survey on emergency readiness and response conducted by the National Association of Area Agencies on Aging and Scripps Gerontology Center at Miami University, area agencies on aging rated their confidence in their capacity to respond to a disaster: 7.4 percent of respondents were very confident, 28.1 percent were confident, 53.0 percent were somewhat confident, and 11.5 percent were not confident at all (Straker 2009). Other research has also looked at the relationship between climate change, disasters, and aging communities and the research and policy agendas that should guide future work on this topic (Boscia 2010; Pillemer et al. 2011; Sykes and Pillemer 2010).

Technology and Big Data

The ongoing explosion of new technological platforms, applications, and enhancements continues to change the very nature of cities and communities. The world of health care has transformed over the past few years as a range of technologies continues to be developed to support the growing community-based older-adult population, a group that will have an increasing level of comfort with and aptitude for handheld and other computer-based technologies. Some of the prominent newer technologies with significant potential to support aging in community include assistive personal technologies, telemedicine, electronic health records, global positioning systems, in-home motion trackers and sensors, communications and engagement platforms, connective technologies, and data analytics.

"Big data" refers to collections of data sets that are so large and complex that they are difficult to process using on-hand data-management tools or traditional data-processing applications; the data generally are processed at the community level or higher. Applications of big data should be able to provide tremendous assistance to planners, public officials, and other stakeholders as they work to develop aging-supportive communities. Large-scale datasets on health-related behaviors, diseases, injuries, and causes of death can help decision makers identify and address health problems more effectively. In addition, information about the social factors that influence health can help planners and public officials better understand many of the community-level influences that affect health outcomes. But key questions about technology and big data exist and should be kept in mind:

- How can ever-increasing technological capacities and the availability of big data increase the aging supportiveness of cities and communities?
- Will the same effort invested in commercial technologies and applications designed to tap into the burgeoning older-adult market also be expended for democratic applications of technology and data to benefit aging-in-community efforts?

Several states, regions, counties, cities, and communities have begun to develop publicly accessible, web-based applications where big data can be aggregated, cross-referenced, and analyzed to identify important correlations between community planning and public health.

Massachusetts Healthy Aging Collaborative

The Massachusetts Healthy Aging Collaborative is a network of community service organizations, health and wellness providers, state agencies, advocates, researchers, funders, and other stakeholders across the state advancing healthy-aging strategies. The collaborative began in 2009 with an assessment of the state of healthy-aging programs in Massachusetts and other states. It developed and updates the Massachusetts Healthy Aging Data Report (Massachusetts Healthy Aging Collaborative 2015), an online interactive data resource that allows users to examine profiles of communities in Massachusetts based on various physical, social, and health variables.

The report provides individual community data along with state averages to show how a community's measures compare to the rest of the state. Indicators of healthy aging are provided along with maps that enable communities to identify local challenges and better allocate resources to address the most pressing physical, social, and health needs of residents. Figure 4.4 shows examples of customizable maps that are free, publicly accessible, and easily downloadable; these maps can be used for a range of planning and public health purposes.

RECOMMENDATIONS FOR THE PUBLIC REALM AND PUBLIC SERVICES

Table 4.1 lists recommendations for planners and public officials looking to better develop the existing public realm and public services to meet the evolving needs and desires of older adults in their communities. Linking a community's physical planning to its public service planning is important in maintaining a truly aging-supportive community. The examples presented in this chapter provide more specific guidance about the design and goals of individual plans and programs, and they are models that cities and communities can use to develop their own location-specific aging-supportive programs.

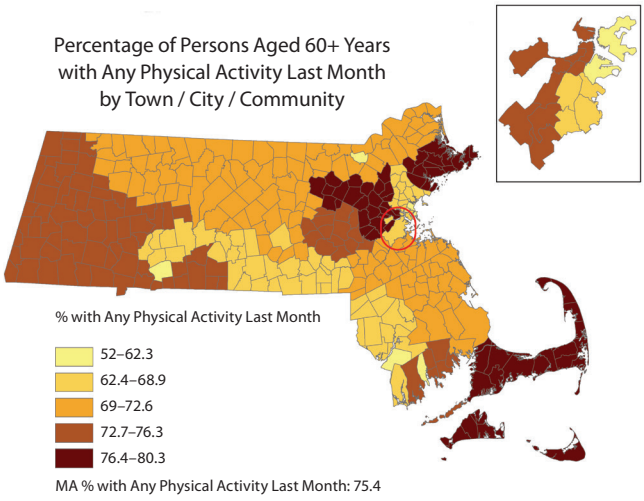

Figure 4.4. Sample custom map (Dugan et al. 2014; Massachusetts Healthy Aging Collaborative)

TABLE 4.1. PUBLIC REALM AND PUBLIC SERVICES RECOMMENDATIONS

Perceive the public realm and public services as important aging-in-community issues.
Look for linkages between planning and public health in policy and program development and programmatically integrate these disciplines where possible.
Seek multisector partnerships and implement project collaborations and ongoing coalitions as appropriate.
Celebrate and work to influence a range of non-older-adult-focused public realm enhancement programs to maximize their broad aging-supportiveness potential.
Nurture the existence of "third spaces" and other important community spaces and facilities that build social capital and foster aging supportiveness.
Recognize and integrate community connectivity, walkability, and accessibility for their aging-supportiveness potential and as more than merely transportation issues.
Look for and support appropriate opportunities for joint uses of community assets and facilities, leveraging scarce resources whenever possible.
Train 311 operators, emergency responders, utility workers, and other local human capital resources to better understand local older-adult issues and resources and be sensitive to older adult callers.
Support and promote the effective use of existing community-based human service providers and programs.
Look for new efficiencies in public service provision, but do not mistake program cuts for finding new efficiencies.
Embrace new technological applications and platforms as appropriate to support aging in community.
Look for appropriate opportunities to utilize the potential of "big data" resources to make better programmatic and resource investment decisions that can help enhance the aging supportiveness of communities.

CHAPTER 5

PLANNING AGING-SUPPORTIVE COMMUNITIES

A growing number of communities throughout the country have started to recognize the issues, opportunities, and challenges related to their aging populations. In many cases, a community's planners and public officials will be asked to provide guidance or develop programs to address the needs of older adult and enhance the community's overall aging supportiveness. While there might be an awareness of existing aging-supportiveness programs, the array of different national, regional, and local programs can be confusing, and determining the type of program most appropriate for a particular community can be difficult. Over the past two decades, governments, nonprofit organizations, and other stakeholders have developed a number of aging-supportiveness programs, both in the U.S. and worldwide.

As U.S. cities and communities have slowly begun to identify the needs of their aging populations, they also have had to address these needs using one of three primary approaches:

1. A "best practices" approach, using national or international programs as models, and implementation of programs consistent with the local needs and situations of communities
2. Customized shared programs or approaches implemented in location-specific ways in a number of cities or communities by states and regions
3. Approaches specifically tailored to individual community contexts that are often an adaptation or combination of programs being used elsewhere

Aging-supportiveness programs use different approaches, and this chapter describes a number of programs that vary in terms of their origins and histories, legal authorities, timeframes, specific objectives, program designs, partners and participants, and funding. The programs, however, are similar in that they follow some version of a three-step cyclical process: (1) assessment, (2) program development and implementation, and (3) analysis and modification.

The aging-supportiveness programs profiled in this chapter, while designed to promote aging in community, also support various aspects of smart growth, sustainability, livability, and other forward-thinking regional and transportation planning practices. The typology of aging-supportiveness programs presented in this chapter is intended to assist planners and public officials in determining the kinds of programs best suited to their cities and communities. Key lessons learned and strategic recommendations will help ensure the development and implemention of successful and sustainable programs.

AGING-SUPPORTIVENESS PROGRAMS

Exemplary examples of aging-supportiveness programs exist at the international, national, regional, and community levels. One approach to categorizing these programs is to consider the geographic scope or location of a program. These programs, however, can also be considered in terms of their approaches to help communities identify the best strategies for their local circumstances and needs. Table 5.1 (p. 70) shows the programs grouped into three categories:

- **Formally structured programs:** Some programs—along with the individualized local programs developed from these approaches—are formally structured, with specific assessment and development stages.
- **Funder- or program-specific programs:** During the early years of aging-supportiveness programs, various national and state sponsoring or funding agencies developed specific program structures and protocols. Participating cities and communities—often selected based

TABLE 5.1. AGING-SUPPORTIVE PROGRAM TYPOLOGY MATRIX

	Formally Structured	Funder- or Program-Specific	Grassroots and Community-Based	No Longer in Operation
National/ International	World Health Organization Global Network of Age-Friendly Cities and Communities Village to Village Network	AARP Livable Communities The AdvantAge Initiative	Communities for All Ages	Community Innovations for Aging in Place Aging in Place Initiavtive (Jewish Federations of North America) Community Partnerships for Older Adults Aging Initiative (EPA)
State		Communities for a Lifetime (Florida) Communities for a Lifetime (Indiana)		
Regional/City/ Community	Age-Friendly Portland Age-Friendly New York City	Community AGEnda Burlington Livable Community Project (Burlington, Vermont) KC Communities for All Ages (Kansas and Missouri) Age-Friendly Philadelphia	Lifelong Communities (Atlanta) Senior-Friendly Mecklenburg (Mecklenburg, County, North Carolina Aging Your Way (Seattle) Livable Communities Collaborative Naturally occuring retirement communities (NORCs) and NORC support service programs (NORC-SSPs)	Aging in Place initiative (Partners for Livable Communities)

Source: Bradley H. Winick, AICP, LEED

on their responses to specific requests for proposal—implemented customized versions of these structures and protocols, with the sponsor or funder influencing local program design. These types of programs were typically more loosely structured than were the formally structured programs.

- **Grassroots and community-based programs:** Other aging-supportiveness programs, primarily but not exclusively local ones, took a more individualized approach based less on existing program models. Such programs have taken a wide variety of strategic and program development approaches but have been based on grassroots and community-organizing strategies.

While almost all aging-supportiveness programs recognize and address the benefits of implementation for a variety of age groups, the majority of programs in fact focus primarily on addressing the needs of older adults. A few programs, however, do specifically have multigenerational and intergenerational focuses, addressing issues affecting people across their lifespans.

National and International Programs

A number of the most notable and well-known national and international aging-supportiveness programs are described in the following sections based partly on work by Grantmakers in Aging (GIA), a national philanthropic organization

dedicated to improving the experience of aging. As part of its Community AGEnda initiative, GIA examined the current state of what it referred to as the "age-friendly community movement" and developed a searchable database of age-friendly programs across the United States (Grantmakers in Aging 2013b).

The World Health Organization Global Network of Age-Friendly Cities and Communities

The World Health Organization has provided key leadership through its Global Network of Age-Friendly Cities and Communities (GNAFCC). In 2006 the World Health Organization brought representatives together from 33 cities and 22 countries to determine the key elements that support active and healthy aging. It then presented its guidelines in *Global Age-Friendly Cities: A Guide* (World Health Organization 2007). While any city or community may apply to join GNAFCC, the program outlines specific membership criteria: "Cities are not required to have achieved age-friendliness at the time of joining the network. However, they must commit to working towards it. Cities and communities can join the network with the commitment by the political leadership to engage in this process" (World Health Organization 2014). The network does not set specific standards or benchmarks for performance, but it does require participating communities to commit to a five-year process of improved age-friendliness through planning, implementation, and evaluation. Portland, Oregon, was the first U. S. city to participate in the network in 2006, and it officially joined in 2011. New York City began a comprehensive assessment in 2007, and it was named an age-friendly city in 2010.

Several dozen U.S. cities, counties, and communities have been designated age-friendly communities—particularly since 2012 when AARP became a U.S. affiliate of GNAFCC and began marketing and promoting the program. They are in various stages of performing assessments and developing actual plans (AARP 2015b). This program is the most widely known of U.S. and international aging-supportiveness programs, and the network now includes 258 cities and communities across 28 counties. It has essentially branded the phrases *age-friendly* and *age-friendliness*.

Village to Village Network

Villages are local membership-based entities that offer a network of transportation, home repair, social, cultural, educational, health and wellness, and member-to-member support services that foster aging in community for individuals who wish to remain in their own dwellings. The Village to Village Network is one of the largest and fastest growing aging-supportiveness networks in the country.

While each village is distinct, most villages offer some type of graduated membership fee structures in order to attract and maintain a diverse membership and to provide a fairly similar set of services. Most villages are still in the fairly early stages, and many are still working on developing financial sustainability models. They are struggling with providing the staff and internal infrastructure needed for the range of desired services, particularly while being able to offer lower or subsidized membership rates to less financially able individuals.

AARP Livable Communities

In addition to its work promoting the Global Network of Age-Friendly Cities and Communities program, AARP has developed and maintained a resource network called AARP Livable Communities with information about livability programs, research, and practices in cities and communities throughout the country. One helpful resource is the set of *AARP Livability Fact Sheets* developed with the Walkable and Livable Communities Institute (AARP 2015a). The fact sheets provide insight, dispel myths, and present data and examples about the ways in which a range of community elements can contribute to livable and aging-supportive communities. The fact sheet topics cover both physical and strategic issues:

- bicycling
- density
- economic development
- form-based codes
- modern roundabouts
- parking
- revitalization without displacement
- road diets
- sidewalks
- street trees
- traffic calming

Not surprisingly, the AARP's Livable Communities work complements and relates to the Global Network of Age-Friendly Cities and Communities program through the World Health Organization.

The AdvantAge Initiative, Center for Home Care Policy and Research

The AdvantAge Initiative was started in 1999 and sponsored by the Visiting Nurse Service of the Center for

Home Care Policy and Research. The core feature of the AdvantAge Initiative is a national comprehensive survey of older adults to measure the elder-friendliness of communities in four areas using 33 related indicators. The AdvantAge Initiative survey provides a "data snapshot" of how well older adults are currently faring in their communities. Local groups then use these survey data to increase awareness about aging, inform service and planning efforts, and spur needed communitywide action in the nonprofit, public, and private sectors.

Since 2002, this survey has been used in more than 50 communities across the country, and it has informed local linkages between aging network and human service stakeholders and community and infrastructure planners. According to the AdvantAge Initiative survey, an aging-supportive community is one that addresses basic needs, promotes independence and well-being for those who are frail or disabled, encourages physical and mental health and well-being, and fosters social and civic engagement.

Communities for All Ages, Intergenerational Center, Temple University

The Communities for All Ages (CFAA) initiative was developed by the Intergenerational Center at Temple University in 1999. Since 2002, CFAA has worked with local community-based agencies to develop multigenerational plans and programs that develop alliances across diverse organizations and systems; engage community residents of all ages in leadership roles; create places, practices, and policies that promote interaction across age groups; and expand on opportunities to meet the needs of people across the life span. More than 20 CFAA intergenerational programs are currently being implemented around the country.

A program evaluation of 23 intergenerational programs found numerous well-being and community capacity successes in the areas of health and wellness, safety, education and lifelong learning, social capital, and residential leadership and social engagement (Henkin, Brown, and Leiderman 2012). This evaluation also notes significant structural and logistical challenges in the areas of funding, organizational and institutional collaboration, time investments, and systematic change.

Community Innovations for Aging in Place, Administration on Aging

The Community Innovations for Aging in Place (CIAIP) initiative was authorized by Congress in the 2006 reauthorization of the Older Americans Act and funded from 2009 to 2012 by the Administration on Aging. CIAIP funded 14 demonstration projects to assist communities in enabling the growing population of older adults to sustain their independence and age in place in their homes and communities. This initiative is no longer in existence.

Aging in Place Initiative, Jewish Federations of North America

Recognizing the potential for broader applicability of the naturally occurring retirement communities support services program (NORC-SSP) model, the Jewish Federations of North America (JFNA) started the NORC Aging in Place Initiative in 2001 to seek federal assistance for the development and testing of the NORC-SSP model nationally. Between 2002 and 2008, JFNA helped local federations and their beneficiary agencies secure federal demonstration grants in 45 communities in 26 states. While this initiative is no longer in existence, JFNA is still involved with dozens of still-active NORCs.

Community Partnerships for Older Adults, Robert Wood Johnson Foundation

The Community Partnerships for Older Adults program, sponsored by the Robert Wood Johnson Foundation and other local funders, ran from 2002 until 2010. It was a program where "diverse local organizations and older adults worked collaboratively in 16 communities to raise awareness of aging issues and to undertake projects to improve the lives of vulnerable seniors" (Robert Wood Johnson Foundation 2014). As part of this program, 24 community agencies around the country received four years of implementation funding to establish local partnerships directly involving older adults as members and leaders, develop community-supported strategic plans to strengthen long-term care and supportive services, and mobilize community resources to support the plans. The plans focused on different issues, including improving the transition from hospital to home, removing cultural barriers to existing services, expanding transportation options, and responding to crises.

Aging Initiative, U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) has addressed issues related to healthy communities and successful aging for many years. For a number of years from the late 2000s into the next decade, the EPA promoted its Aging Initiative, which combined elements of its smart growth and active aging agendas. This initiative focused on four environmental factors assumed to greatly affect older adults' abilities to engage in active aging and remain in their communities:

(1) better housing, (2) access to transportation, (3) access to healthy foods, and (4) more social capital.

While the Aging Initiative is not currently active, the EPA maintains an Aging Initiative listserv and remains engaged in aging-in-community and healthy-aging research and advocacy.

State Programs

Several states have developed statewide aging-supportiveness programs and initiatives, which typically provide generalized guidance, support, and data. In most of these states, cities are invited to join the programs and tailor them to meet the particular needs of older adults in their communities.

Communities for a Lifetime Program, Florida

In 2001 the implementation of the Communities for a Lifetime (CFAL) initiative expanded the focus of Florida's earlier Elder Ready Communities program to include community improvements that benefit the lives of all residents, young and old. The number of active CFAL programs has since grown to 119. The initiative focuses on improvements in a variety of areas based on community needs, including housing; transportation and mobility; employment; health, wellness, and injury prevention; partnerships and collaborations; intergenerational living; and lifelong learning opportunities.

A 2012 evaluation of the CFAL program found that more than 2.6 million residents benefitted from approximately 4,000 initiatives, with more than one million of these individuals being older adults age 60 and over (Florida 2013). Older adult residents mainly used services that came from transportation, health and wellness, and injury prevention initiatives.

Communities for a Lifetime Program, Indiana

The state of Indiana has brought several national aging-supportiveness programs together to form its statewide Communities for a Lifetime (CfaL) program. (The statewide programs in Florida and Indiana are unrelated.) In 2006 the first statewide scaling of the AdvantAge Initiative began in Indiana, which provided a foundation for work in three Indiana communities—Bloomington, Huntington, and the Martindale-Brightwood neighborhood of Indianapolis. These communities are also part of the Community AGEnda program.

The four areas of focus in the Indiana CfaL are very similar to the national AdvantAge program: (1) addressing basic needs, (2) optimizing physical and mental health and well-being, (3) promoting social and civic engagement, and (4) maximizing independence. Since its inception, eight Indiana communities have been designated Communities for a Lifetime, and CfaL projects exist in over 60 communities. Indiana in particular has integrated issues of and opportunities for the older-adult and disability communities through its CfaL program.

Regional, City, and Community Programs

In *The Maturing of America: Communities Moving Forward for an Aging Population* (National Association of Agencies on Aging 2011), a nationwide survey of communities showed that only 17 percent had strategic plans in place that specifically reflected the needs and potential contributions of older adults; an additional 36 percent of respondents reported that this was being planned. Only 44 percent of communities reported having zoning in place to support aging in community, such as higher-density older-adult housing and mixed use developments and amenities, and another 22 percent of respondents reported they were planning such zoning.

However, a growing number of forward-thinking regions, cities, and communities—large and small—around the country have developed and are operating a range of expansive programs addressing the needs of older adults. While these programs exist in communities across the country, planners and public officials in lower-density rural areas may not have the resources necessary to develop such broad aging-supportive programs without extensively drawing on existing resources, such as area agencies on aging or regional and statewide transportation services organizations.

Age-Friendly Portland, Portland State University, Portland, Oregon

In 2006 the World Health Organization approached the Institute on Aging at Portland State University to join the Global Age-Friendly Cities Project and collect data on Portland's age-friendliness. Portland was the only U.S. city among the 33 cities in 22 countries around the world that participated in the original project. In June 2010, Portland was one of nine cities selected to be a pioneer member of the World Health Organization's Global Network of Age-Friendly Cities and Communities. Requirements for membership include conducting a baseline assessment of the city's age friendliness (which Portland completed in 2007), developing an action plan for enhancing the city's age friendliness, implementing the plan, developing indicators of progress, and monitoring progress (Neal and DeLaTorre 2007).

Since the beginning of the Age-Friendly Portland project, an advisory council made up of members from the pub-

lic, private, nonprofit, and university sectors has guided the work. This model, characterized as a university-city-community partnership, distinguishes this project from others (Neal, DeLaTorre, and Carder 2014). Portland's approach also incorporated both older-adult and disability community issues to a greater extent than most other aging-supportive programs.

After completing its baseline research, the Institute on Aging drew from the findings about Portland's age-friendly features and barriers that resulted in a section in the 2012 multijurisdictional strategic plan, *The Portland Plan* (Portland 2012) entitled "Portland is a Place for All Generations." The plan identified the following 10 specific actions "that help make Portland a more physically accessible and age-friendly city" (Portland 2012, 25):

- **Action 1:** Enforce Title VI (the *Portland Civil Rights Title VI Plan* ensures equal access to all city services, benefits, and programs)
- **Action 2:** Track the information needed to understand disparities
- **Action 14:** Implement the Disabilities Transition Plan
- **Action 78:** Remove barriers to affordable housing
- **Action 82:** Physically accessible housing
- **Action 84:** Align housing and transportation investments
- **Action 103:** Age-friendly city
- **Action 107:** Quality, affordable housing
- **Action 107:** Transit and active transportation
- **Action 125**: Pedestrian facilities

In 2013 the Age-Friendly Portland Advisory Council (2013) developed the *Action Plan for an Age-Friendly Portland*. This plan is an implementation strategy that includes the following ten action areas encompassing the physical and social environments and building on the World Health Organization's eight age-friendliness domains: (1) housing, (2) transportation, (3) outdoor spaces and buildings, (4) respect and social inclusion, (5) civic participation and volunteerism, (6) employment and the economy, (7) social participation, (8) communication and information, (9) community services, and (10) health services.

Action items are specified for each area, along with potential partners for implementation. Important considerations—such as social justice and equity, intergenerational linkages, considerations about safety and security, and the potential contribution of new technology—are included throughout the action areas. The Age-Friendly Portland project has proven flexible and nimble, continuing through a succession of mayoral administrations and proving compatible with various city and regional planning initiatives.

Age-Friendly New York City

Beginning in 2007, New York City's mayor and city council president, along with the New York Academy of Medicine (NYAM), launched the Age-Friendly New York City project with a comprehensive assessment of the issues and challenges facing older New Yorkers. Over 1,500 older adults across the city participated in guided conversations. The assessment also included roundtable discussions with hundreds of professionals, a literature review, and mapping projects. The NYAM summarized the assessment in *Toward an Age-Friendly City: A Findings Report* (Finkelstein et al. 2008).

As an important complement to the community assessment, the mayor and city council asked all city agencies to consider how they could improve the way that they integrate older adults into their work and serve them. Based on this review, the city developed 59 initiatives to improve the quality of life of older adults. More broadly, the initiatives seek to make New York City a better place to grow old by promoting an "age-in-everything" lens across all aspects of city life. The initiatives also ask the city's public agencies; businesses; cultural, educational, and religious institutions; community groups; and individuals to consider how changes to policy and practice can create a city more inclusive of older adults and more sensitive to their needs (New York 2009).

In 2010 the Age-Friendly New York City Commission was established to make improvements in the city; the commission is made up of leaders from both the public and private sectors. The commission's current initiatives include aging improvement districts; age-friendly businesses; and age-friendly schools, colleges, and universities (New York Academy of Medicine 2015).

The Aging Improvement Districts include pilot districts in three neighborhoods: East Harlem, the Upper West Side, and Bedford-Stuyvesant. Each district has conducted a community consultation with older adults, appointed an advisory group, and created an implementation strategy. The Age-Friendly Local Business initiative is an educational outreach campaign providing practical low-cost or no-cost tips to help businesses attract more older customers. To date, over 1,000 businesses citywide are participating. The Age-Friendly Schools, Colleges, and Universities initiative seeks to increase educational opportunities for older adults and foster an age-friendly city.

Community AGEnda

Started by Grantmakers in Aging in 2012, Community AGEnda supports the efforts in five areas—Maricopa County, Arizona; Miami-Dade County, Florida; four communities in Clayton County and DeKalb County, Georgia; the greater Kansas City area; and three communities in Indiana—that were already committed to and involved with age-friendly development. The program was intended to help these communities accelerate and expand their work. Each community received two years of grant funding up to $140,000, including a one-year grant renewal announced in October 2013, to support age-friendly planning and implementation efforts. Recipients were also required to secure matching funds of at least $40,000 from local sources in order to qualify for the maximum grant (Grantmakers in Aging 2015).

In addition to these five awards, Community AGEnda is using additional funding to assess and support similar aging-supportive work across the country. These projects include efforts to raise awareness about the importance of age-friendly communities; to develop planning, assessment, and strategy tools and resources, such as an online searchable database of aging-supportive projects in the United States; and a resource and strategy guidebook called *Aging Power Tools* (Grantmakers in Aging 2013).

The Burlington Livable Community Project, Burlington, Vermont

The Burlington Livable Community Project (BLCP), started by AARP Vermont and the City of Burlington, is a collaborative approach to identify the needs of aging residents. The BLCP began with information gathering and data analysis, which highlighted the urgent need to focus on livability and the evolving needs of Burlington's growing and diversifying older-adult population. In 2007 the BLCP published an action plan and articulated a vision to address the community's key housing, mobility and accessibility, and community engagement challenges. It identified policies and specific steps within each of these three areas to be undertaken over the ensuing decade (AARP 2007).

Since the publication of its 2007 plan, the BLCP has lived as an ongoing project, with the roster of stakeholders growing beyond its initial group of 30 city departments and community organizations. The BLCP's spirit and recommendations have influenced many projects and efforts, including the *Burlington Comprehensive Development Ordinance* (Burlington 2008), transportation planning, human service planning, and a demonstration project to better link older-adult housing and health care.

KC Communities for All Ages, Kansas City Region, Kansas and Missouri

KC Communities for All Ages (CFAA) began in 2007 when a local nonprofit received a Jewish Heritage Foundation grant to develop a community-based strategic plan for aging in metropolitan Kansas City. A large group of community stakeholders prepared the plan, and it was completed in 2008. These efforts have continued on under a succession of program names: KC4 Aging in Place, KC4 Aging in Community, and KC Communities for All Ages. (The evolution of program names perhaps reflects the broadening of the mission, starting with a dwelling-centric focus, expanding to a broader community perspective, and moving to a full-lifespan community perspective.) CFAA has been involved with several national programs, including the Aging in Place initiative and, currently, the Community AGEnda program.

Although CFAA initially began as a program of a local nonprofit, it became a program in the community development department at the Mid-America Regional Council (MARC) in 2012. MARC is a nonprofit association of city and county governments and the metropolitan planning organization for the bi-state Kansas City region. MARC is responsible for regional environmental, transportation, community development, and community services planning. It also serves as the area agency on aging for Cass, Clay, Jackson, Platte, and Ray counties in Missouri; this has allows for enhanced integration of older-adult-oriented planning with MARC's other planning services.

CFAA and MARC have been quite productive and have completed several aging-supportive projects:

- They developed the *Older Adult Transportation and Mobility Action Plan* in 2013 (MARC and KC Communities for All Ages 2013), which is helping to guide development of action plans for transportation services, mobility management, and infrastructure for MARC's Regional Transportation Outlook 2040 plan (MARC 2015). *Toward Zero Deaths, 2013–2017: Kansas City Regional Transportation Safety Blueprint* (MARC 2014) also included older-driver safety strategies, and the CFAA website incorporated information about older drivers and safety.
- They worked with the First Suburbs Coalition to develop *Making Your Community Work for All Ages: A Toolkit for Cities* (First Suburbs Coalition and KC Communities for All Ages 2013), a resource to help elected officials, planners, and community leaders address aging-related issues.
- They organized the Smart Design Workshop in 2013, which focused on universal design as a strategy to support

individuals at all stages of life. In addition, they developed *Home: Communities for All Ages Idea Book* (First Suburbs and KC Communities for All Ages 2013) to provide information about renovating homes and neighborhoods to better meet the needs of current and potential residents wanting to age in community.

CFAA is currently working on implementation efforts that have emerged from these initiatives, providing ongoing community education and leadership, and ensuring that an older-adults lens is applied to regional and local planning and projects.

Age-Friendly Philadelphia, Philadelphia Corporation for Aging

The Philadelphia Corporation for Aging (PCA) is a nonprofit organization established in 1973 to serve as the area agency on aging for Philadelphia. PCA provides a wide range of services to support older adults and funds more than 180 organizations in the aging network, including senior centers, adult day care programs, and organizations providing transportation services, legal assistance, housing repair and home modifications, in-home care, and home-delivered and congregate meals.

PCA recognized that the needs of all older adults could not be addressed by these services alone. Broader community issues also make it harder for older adults to effectively age in community—for example, broken sidewalks, fear of crime, and a lack of grocery stores with healthy foods are challenges for older residents. PCA has built strong relationships with agencies and organizations beyond the traditional aging network and expanded its ability to influence policies, plans, and programs that affect the social and environmental determinants of heath. City government, planners, hospitals, universities, community development corporations, and advocacy groups now regularly collaborate with PCA to enhance the quality of life for older adults in Philadelphia.

Age-Friendly Philadelphia is the program PCA initiated in 2009 to develop aging-related programs and foster effective partnerships. The program notably takes a multigenerational approach, recognizing that many of its recommended neighborhood improvements will benefit residents of all ages. Age-Friendly Philadelphia spawned GenPhilly, a nationally recognized network of emerging professionals who take a personal and professional interest in aging issues by serving as aging ambassadors in their workplaces.

PCA chose to use the EPA's Aging Initiative model—which is similar to the World Health Organization's Global Network of Age-Friendly Cities and Communities model and other prominent program models—to guide its work. PCA's key areas of work include the following efforts: integrating aging into the city's new zoning code, creating the Age-Friendly Parks Checklist (Philadelphia Corporation for Aging 2011), and facilitating community gardens at senior centers and older-adult housing sites. PCA has also been a national leader in leveraging resources and managing efforts between the aging and public health fields by aligning its Age-Friendly Philadelphia strategies and programs with the National Prevention Strategy, the nation's roadmap to better health and wellness, which was created through the 2010 Patient Protection and Affordable Care Act.

Lifelong Communities, Atlanta, Georgia

Lifelong Communities is an initiative by the Atlanta Regional Commission (ARC) that promotes places where individuals can live healthily throughout their lifetimes. ARC, the designated metropolitan planning organization, is the regional planning and intergovernmental coordination agency for the 10-county area surrounding the city of Atlanta. ARC also serves as the region's area agency on aging, and this helps account for the notable integration of older-adult needs into ARC's plans.

Lifelong Communities provides a full range of options to residents of all ages for ensuring a high quality of life, with three major goals: (1) promoting housing and transportation options, (2) encouraging healthy lifestyles, and (3) expanding information and access to services. The following are guiding principles to create a Lifelong Community:

- Create connectivity.
- Increase pedestrian access and transit.
- Provide neighborhood retail and services.
- Design for social interaction.
- Provide a diversity of dwelling types.
- Design for healthy living.
- Give consideration to existing residents.

ARC created the Lifelong Communities initiative in 2007 to scale up lessons learned through its Aging Atlanta project, which was funded by the Robert Wood Johnson Foundation Community Partnerships for Older Adults program. From the start, Lifelong Communities has been well integrated into the key activities of ARC, including land-use, transportation, environmental, water-resources, utilities, open-space, and health-care facilities planning. Lifelong Communities held a nine-day design charrette in 2009 that included the

development of specific community redevelopment plans to demonstrate how six diverse sites could be transformed into Lifelong Communities (Atlanta Regional Commission 2009). While the economic downturn has stalled many of these plans, about 18 communities throughout the Atlanta region currently have active or emerging Lifelong Communities projects. The initiative has produced an extensive collection of resource materials, including presentations, fact sheets, handbooks, toolkits, design guidelines, best practice references, and sample codes and ordinances.

Senior-Friendly Mecklenburg, Mecklenburg County, North Carolina

Mecklenburg County, which contains the city of Charlotte, is North Carolina's most populated and most densely populated county; it is projected that the county's population over age 60 will increase 260 percent over the next two decades. The Status of Seniors Initiative was a committee formed in 2004 to study the current aging situation in Mecklenburg County and to provide recommendations for fostering a senior-friendly community. The initiative utilized a community assessment matrix, a modified version of one from the North Carolina Division of Aging and Adult Services. The matrix identified the following areas of interest and concern: physical environment, health, economy, technology, safety and security, social and cultural involvement, services and support, and resources. The initiative made seven specific recommendations:

1. Establish a multifunctional center for aging to be the focal point for older-adult issues and information.
2. Achieve a senior-friendly physical environment.
3. Stress the importance of caregiver celebration and support.
4. Launch a crime-prevention campaign in high-density areas with a broad focus on older adults.
5. Encourage transportation independence through the transformation of transportation services.
6. Develop systematic, integrated approaches for community education and information.
7. Review long-term care system public policies.

The initiative's 2005 *Status of Seniors Initiative: Strategic Planning Report* (Mecklenburg County 2005) served as a call to action for the public and private sectors in the region to adopt the report's recommendations and strategies. Overseeing the implementation of the initiative has become the responsibility of the Charlotte-Mecklenburg Council on Aging. In 2012, the council reassessed the initiative's successes and challenges and produced an update to the report that identified a series of emerging issues: safety, accessible transportation, mixed use neighborhoods and communities, accessible homes, and clean environments (Mecklenburg County 2013).

Aging Your Way, Seattle, Washington

Seattle has enacted a notable aging-supportiveness program model, one that is driven largely by community organizing principles rather than the application of a national model or one based on funder or program-specific approaches. Aging Your Way (AYW) began in 2009 as a community-driven, countywide initiative. It was started by Senior Services, a nonprofit agency that coordinates programs such as senior centers; adult day health care and wellness; meal programs, like Meals on Wheels and community dining; information; transportation; caregiver support; and home repair.

The program does not provide an agenda or follow a specific program design; rather, it lets the community lead. This approach is not typical for service-providing organizations, which are more used to being accountable to government about contracts for services provided, thinking of clients as a service population, telling elected officials about the needs in the community and asking for more government funding, associating with other people from the aging network, and doing needs assessments and collecting data. AYW rejected that model and wanted to shift to being more accountable to the community than government, to lead from behind, and to successfully cross silos, sectors, and socioeconomic, racial, cultural, and identity boundaries to reach people in their own neighborhoods.

From 2010 to 2011, AYW held 12 "gatherings" attended by 700 older adults, with about 65 people coming to each gathering. Facilitators at each event motivated attendees to envision the kind of community that would support them as they aged, and they brainstormed about concrete projects that would help make these visions reality. Six themes emerged from the gatherings that reflect the desires of older adults for communities that are intergenerational, multicultural, sustainable, supported by technology, and focused on local economies:

1. **Local economies:** Older adults want neighborhoods that focus on local economies, such as community gardens and farmers' markets.
2. **Transportation:** In addition to better public transportation, older adults desire more neighborhood shuttle services, rideshares, and individualized transportation options.

3. **Lifelong learning:** Lifelong learning means not only continuing education but myriad diverse arrays of experiences for older adults.
4. **Housing:** Alternative housing options and affordable housing were key topics at the gatherings.
5. **Health care:** Older adults support any community-driven program that provides better health options or actions.
6. **Built environment:** Programs that improve the built environment and are community-driven do not need to be expensive or require new laws.

Concrete projects that evolved from ideas presented at the gatherings include Peppi's Park, a local effort to reclaim a forest that was overgrown with invasive plants; time banking, where individuals earn time credits by helping others; world dance parties; and Learning Northwest, an online resource guide to lifelong learning opportunities.

Livable Communities Collaborative, National Association of Area Agencies on Aging

In 2013 the National Association of Area Agencies on Aging (n4a) selected six communities to participate in the Livable Communities Collaborative. The initiative created local partnerships between at least three sets of stakeholders—the area agency on aging, the local municipality or other government entity, and community organizations—to identify and address ways to ensure that the communities meet the needs of residents of all ages. The six participating communities are Larimer County, Colorado; Miami Gardens, Florida; Monroe County, New York (the Rochester area); Santa Fe, New Mexico; Sedgwick County, Kansas (the Wichita area); and York, Pennsylvania.

MetLife funded n4a's program-related costs, and the program required local partnerships to secure local funding. In addition, the Livable Communities Collaborative worked with the Aging Network's Volunteer Collaborative to help participating communities develop the social capital of older adults by training volunteer teams that planned and advanced the goals of the livable communities agenda. This program was funded for one year, and it is currently concluding with identification of recommendations and lessons learned.

Naturally Occurring Retirement Communities

While the Jewish Federations of North America's Aging-in-Place initiative is no longer active, the number of naturally occurring retirement communities (NORCs) and NORC support services programs (NORC-SSPs) throughout the country has increased, which makes them an important consideration for cities and communities planning and implementing aging-supportiveness programs and looking for opportunities to better integrate community-based housing and human and health care services. Some planners and public officials are actively working to incorporate the NORC model in their communities as an aging-in-community strategy. In the Town of North Hempstead, New York, for example, the original planning for a NORC-SSP in two census tracts led to the development of a town-wide aging-in-community initiative.

Aging in Place Initiative, Partners for Livable Communities and National Association of Area Agencies on Aging

The Aging in Place Initiative focused on quality-of-life and livability issues for older adults. The initiative brokered programs between local governments, community institutions, and nonprofits to develop livability guides, community workshops, and reports. The initiative also focused on building sustainable community partnerships to solve local issues affecting older adults. It was sponsored by Partners for Livable Communities (PLC), a longstanding technical assistance and advocacy organization, in partnership with the National Association of Area Agencies on Aging; the MetLife Foundation and local funders provided financial support for the initiative.

Between 2007 and 2009, the Aging in Place Initiative held 12 regional workshops around the country. Each workshop focused on a particular theme that reflected a local issue of interest, often a topic that the community had started to explore. The workshops also gave local groups the opportunity to partner and take communitywide action to address the local issues examined in the workshops. With PLC's assistance and the MetLife Foundation's support, each community was able to achieve its targeted goal and work to create a more livable community for all ages. While the Aging in Place Initiative is no longer active, some of the local initiatives have evolved into independent local programs and PLC continues to work on aging-in-community and livable communities issues.

Intergenerational and Multigenerational Approaches

A number of important stakeholders have emphasized the societal, financial, and coalition-building merits of taking intergenerational and multigenerational approaches to aging-supportive planning, and many creative programs have taken multigenerational approaches in developing aging-supportive communities. Two of the leaders in research and development of multigenerational aging approaches are programs at Temple University and Cornell University.

TABLE 5.2. AARP ATTRIBUTES COMPARED TO WORLD HEALTH ORGANIZATION DOMAINS

AARP Livable Communities Attributes	World Health Organization Age-Friendly Cities and Communities Domains
Transportation	Transportation
Housing	Housing
Walkable environments	Outdoor spaces and buildings
Care and support services	Community support and health services
Health services	Social participation
Engagement of residents in social life	Civic participation and employment
Engagement of residents in civic life	Communication and information
Safety and security	Respect and social inclusion
Recreation and cultural activities	
Access to grocery stores and other shopping	

Bradley H. Winick, AICP, LEED (adapted from AARP Public Policy Institute 2005)

The Intergenerational Center, Temple University

The Intergenerational Center at Temple University was created in 1979, and it promotes strong livable communities by bringing individuals of different generations together to address critical concerns and create lifelong opportunities for civic engagement. The center develops, evaluates, and replicates innovative community-based programs; identifies and promotes promising intergenerational practices; and serves as a resource for organizations and communities. The Intergenerational Center developed and sponsored Communities for All Ages, the national model program discussed earlier.

Planning Across Generations, Cornell University

Cornell University's Planning Across Generations program in the Department of City and Regional Planning has developed a framework for multigenerational planning that draws on commonalities between UNICEF's Child-Friendly Cities program and the World Health Organization's Global Age-Friendly Cities protocols. The framwork challenges program planners to foster individuals' independence; support informal networks of friends, families, and neighbors; and promote community-based market and government services. The work from this program also addresses gender and the linkages between local economic development efforts and child care; it calls for new coalitions between stakeholders representing older adults and families with children and the joint use of neighborhood schools and other public facilities.

ASSESSMENTS, INDICES, AND RANKINGS

In recent years, numerous aging-supportiveness program assessments, indices, and rankings have been developed to evaluate the range of programs in different cities, communities, regions, and states.

Assessments

Most of the aging-supportiveness programs reviewed in this chapter have a community assessment component as part of the initial program. Assessments can be rigorous and formal—requiring substantial time to complete by hand, online, or through interviews—or they can be simple and informal. Assessments are generally developed after preliminary input about a community's existing conditions, and they typically use both objective questions (e.g., "How many bus stops exist in your community?") and subjective ones (e.g., "How safe do you feel when you are on the sidewalks in your community?") to understand a community's existing assets, needs, challenges, and opportunities. Assessments typically measure identified attributes or domains related to physical and socio-emotional elements of a community that reflect important characteristics of its aging supportiveness. Table 5.2 compares the attributes and domains assessed for national and international AARP and World Health Organization programs. Numerous jurisdictions have developed their own assessment tools, while other communities have elected to use the assessment tools of national and international programs.

Indices

Indices build upon the somewhat anecdotal nature of assessments and attempt to establish more objective and comparative standards for evaluation and comparison of communities. Indices generally rate a community's progress over time in meeting a particular set of aging-supportiveness objectives. Indices tend to be more rigorous than assessments, and they typically include extensive interviews or written responses. Among the more notable indices is the AdvantAge Initiatives' set of 33 identified measures of a community's aging supportiveness. The Stanford Center on Longevity and the MetLife Mature Market Institute (2013) developed an indicator system to measure a community's ability to sustain aging-in-place efforts. These measures can be evaluated using readily available sources and do not require extensive data gathering.

AARP and the World Health Organization are in the process of developing aging-supportiveness indices. AARP's index will follow these principles:

- Be relevant and useful to existing community livability improvement efforts
- Incorporate the needs of older adults into a measure of general livability
- Be useful for educating people about what they need as they age
- Help planners, policy makers, and decision makers better understand the needs of an aging population and the steps that can improve livability
- Be relevant to all, regardless of where people live, their backgrounds, or their incomes
- Acknowledge data limitations

As is the intent with other indices, AARP seeks to create an index to be a useful tool to measure a community's livability across lifespans, support aging-supportiveness enhancements in the community, and help individuals gauge a community's aging supportiveness for their own locational decisions (Harrell et al. 2014).

Rankings

Rankings measure aging-supportiveness levels across communities and programs. Credible comparative rankings are difficult because of limited and varying metrics, and these generally are seen as more subjective. The perception of subjectivity and limited value is underscored by the proliferation of aging-supportiveness articles and reports—such as "Best Places to Retire"—that appear to be competing for the attention of the older-adult market. While rankings receive a good bit of attention in the media and give highly-ranked communities good marketing material, they are generally of little use for serious aging-supportiveness program development. However, one of the most rigorous and credible recent rankings comes from the Milken Institute; the authors distinguish their comprehensive index from others "based on opinion and speculation, or focused on a limited aspect of aging" (Chatterjee and DeVol 2012, 3). The index is data driven and includes rankings for both large cities and smaller metropolitan areas and for different groups of the aging population.

KEY LESSONS FOR PLANNING AGING-SUPPORTIVENESS PROGRAMS

A review of aging-supportiveness programs in the three typology categories at different geographic scales suggests a number of key lessons for planners for the development of programs in any city or community:

- **Commitment and leadership are critical:** Successful programs will need reliable political and institutional commitment and leadership; developing an enduring aging-supportiveness program will only happen with both of these, and relying solely on one pillar for support is not prudent.
- **Funding—especially local funding—is fundamental:** Developing and operating an aging-supportiveness program will incur startup costs and require ongoing operational funding. A lack of advance planning for staff and consultant costs and ways to sustain the effort has led to failure in the past.
- **Programs should be broad-based and inclusive:** Successful programs are generally those that include a wide range of individual and institutional stakeholders. Programs that seek out hard-to-reach stakeholders will likely benefit greatly.
- **Visibility is crucial:** Programs developed behind closed doors and with limited stakeholder input or public visibility are most likely to be programs that will not receive widespread community support. A program should not be unveiled to the public; rather, it should be developed with the public.
- **Flexibility and nimbleness are important:** Any aging-supportiveness program will likely need to weather changes in the local political, social, and institutional environments. Adaptability is an important program asset that encourages sustainability.

- **Implementation should not be neglected:** Plans or programs that are not developed with adequate attention and commitment to implementation are those plans or programs that are most likely to simply gather dust on bookshelves. Some entity will need to oversee the program's implementation.
- **A key activity is building and joining coalitions:** Linking aging-supportiveness programs to other programs and agendas helps leverage efforts. If a local aging-supportiveness coalition does not exist, organizations should move to form one.
- **Early victories are meaningful:** Good publicity matters, and program should seek it out for small, inexpensive, and tangible successes.

RECOMMENDATIONS FOR PLANNING AND IMPLEMENTING AGING-SUPPORTIVENESS PROGRAMS

Planners and public officials looking to develop and implement aging-supportiveness programs in their communities have a number of program models to guide them. One of the first key decisions is whether to follow an existing approach or program or develop this separately. However communities choose to address this fundamental strategic issue, they can still consider the strategic recommendations shown in Table 5.3. Program examples and other resources in this report provide more specific details about individual programs, and this should help planners better understand what elements are applicable to their communities as they begin developing location-specific programs.

TABLE 5.3. AGING-SUPPORTIVENESS PROGRAM RECOMMENDATIONS

Review existing aging-supportive community programs and decide what is right for the community. Do not adopt an existing program for the wrong reasons, such as name recognition or because of political or funder pressure.
Develop local partnerships involving the aging network (e.g., the area agency on aging); planning organizations (e.g., the metropolitan planning organization); and organizations from the corporate, small business, nonprofit, faith-based, educational, civic, foundation, and professional sectors.
Build upon and leverage the community's existing human, organizational, locational, cultural, and infrastructure assets.
Identify political and other powerful champions, but do not align too closely with specific political champions or their agendas, as they may one day be gone.
Do not exclusively rely or rely too heavily on public-sector ownership of the effort, and make sure that the program is not simply seen as another unrealistic public-sector aspirational plan.
Engage older adults throughout the process to support a "nothing about us is without us" approach and provide reasonable accommodations (such as readable documents and captioning and sign language interpreters at public meetings).
Acknowledge that assessment is important, but avoid getting too bogged down in data analysis, particularly if it will not likely energize the general public or potential partners.
Translate recommendations into action through incremental implementation; patience; and the identification of roles, responsibilities, and deadlines.
Focus on early, low-cost victories that will build momentum and strengthen coalitions, and leverage existing projects and activities.
Develop a budget to cover staff and consultant time for the several years needed to develop and implement a program.
Identify and secure funding for a multiyear assessment, implementation, analysis, and modification process cycle.
Educate the broader community continually and reach out for new partners.
Remember that the goal is communities that are aging-supportive throughout people's lifetimes; the effort should never be seen as just benefitting older adults.
Develop locally appropriate ways to apply to apply an older-adult lens to all planning situations.

CHAPTER 6

RECOMMENDATIONS FOR PLANNING AGING-SUPPORTIVE COMMUNITIES

The previous chapters have provided a number of recommendations for planners and public officials to consider as they develop, promote, and operate aging-supportive cities and communities. All communities are different, and each has its own needs, challenges, resources, geography, history, and cultural and political environments. What is appropriate for larger, denser cities and urban centers is unlikely to be directly applicable to smaller cities, suburbs, and exurban and rural areas.

These recommendations, however, can be organized in various ways to help communities better understand the options and approaches available to them. They can be divided into two categories: (1) general or strategic recommendations that apply primarily to the process of making communities more aging-supportive and (2) specific recommendations for particular projects that communities can use to help them become more aging-supportive. Table 6.1 (pp. 84–86) organizes these various recommendations into these two categories. The recommendations can also be organized around the topic areas of each chapter: housing, mobility, the public realm and public services. and the planning of aging-supportive communities.

Housing recommendations focus on communities fostering an inclusive and equitable environment, assessing current and projected future housing stock against levels of need, and eliminating barriers to providing a range of affordable and appropriate housing options to older adults throughout communities. Housing should be linked to a community's transportation services, health care and human services, business and cultural amenities, and public facilities and open space.

Mobility recommendations focus on taking an integrated approach to planning and developing truly connected and accessible communities that meet the needs of pedestrians, cyclists, motorists, and transit riders. These mobility networks should work for all demographic groups by reducing automobile dependency and providing a range of transportation options. Transportation planning should be integrated into housing and land-use planning efforts through ongoing partnerships and collaborations with other sectors and services.

Public realm and public services recommendations focus on communities linking public health and planning through partnerships and coalitions that foster the efficient and effective use of existing community services. These enhanced collections of services can then be augmented by the creative use of community spaces with the goal of creating aging-supportive systems that enhance the lives of all community members.

Aging-supportive community planning recommendations focus on communities reviewing their existing strengths and challenges and building on existing assets. This process allows communities to establish appropriate and implementable strategies to achieve aging supportiveness, including ongoing coalition-building, community outreach and engagement, and assessment measures.

NEXT STEPS

Each community must evaluate its needs, challenges, and current assets as it develops a locally appropriate aging-supportiveness strategy. In addition, each community will find itself at a different point in this process. While some communities are already quite engaged in these efforts, others are only now beginning to realize that that changing demographics will require more dedicated planning.

Any community starting or continuing the process of planning for older adults can ask the following questions: Which key community aging-supportiveness components are already in place and which are missing? Are the right stakeholders already involved in and committed to this effort? If not, who is not involved? If there is not already an

TABLE 6.1. AGING-IN-COMMUNITY RECOMMENDATIONS BY TYPE

	General Strategic/Process Recommendations	Specific Project/Program Recommendations
RECOMMENDATIONS FOR CREATING HOUSING OPTIONS TO SUPPORT AGING IN COMMUNITY	Develop an inclusive mindset about the need for housing for older adults throughout the community. Develop ongoing working partnerships with organizations focused on a variety of topics (e.g., affordable housing, health care, transportation, and open space) and sectors (e.g., businesses, nonprofit organizations, and the faith-based community) to maintain momentum on implementing older-adult housing plans. Maintain working partnerships with human and health care service providers to better integrate linkages with older-adult housing developments in the community. Strive for balance between maintaining existing neighborhood character and meeting evolving older-adult housing needs to support aging in community. Help educate the community about the benefits throughout the lifespan of aging-supportive communities and the importance of meeting older-adult housing needs.	Perform an assessment of older adults' current and future housing needs and demands to better understand where they live, their housing options, and barriers to aging in the community. Develop an older-adult housing plan to ensure that older adults who want to age in the community will not be forced out due to a lack of appropriate and affordable housing options. Recognize that the vast majority of older adults do not, and likely will not, live in identifiable older-adult housing developments, and work to educate the community about this fact. Focus on an older-adult housing plan, including the defining of implementation action steps with assigned responsibilities and deadlines. Review the community's zoning, building, and other related codes and ordinances to ensure they are adequately flexible, promote overall community accessibility, and support older adults and aging in community. Eliminate from existing codes and ordinances any disincentives or impediments to an aging-supportive community. Embrace new technological and service provision developments that can support the aging-supportiveness potential of the community.
RECOMMENDATIONS FOR CREATING MOBILITY OPTIONS TO SUPPORT AGING IN COMMUNITY	Place community transportation within the broader context of mobility, and address issues of accessibility, convenience, safety, affordability, and efficiency. Engage with all ongoing transportation- and mobility-planning efforts and stakeholders throughout your community to better coordinate activities and leverage resources. Consider the distinct and interconnected mobility needs of different user groups, including pedestrians, cyclists, motorists, and transit riders.	Promote pedestrian safety throughout the community using traffic-calming techniques, improved signalization, and the enhanced design of pedestrian facilities—in addition to traffic and driver safety measures to improve the mobility of older drivers. Ensure that community land-use planning improves older-adult mobility through zoning enhancements that support the logical location of older-adult housing and services near transportation and mobility infrastructure. Consider the redesign of community roadways using complete streets principles that support the mobility needs of all users groups, including the evolving needs of older adults.

TABLE 6.1. AGING-IN-COMMUNITY RECOMMENDATIONS BY TYPE (CONTINUED)

	General Strategic/Process Recommendations	Specific Project/Program Recommendations
RECOMMENDATIONS FOR CREATING MOBILITY OPTIONS TO SUPPORT AGING IN COMMUNITY (CONTINUED)	Acknowledge the different and evolving mobility needs and challenges of different community members—including but not limited to older adults.	Develop an integrated community bicycle network that includes dedicated bike paths, wider bike lanes, lower vehicle speeds, segregation from vehicles, adequate rest areas, lighting, and wayfinding signage. Commit adequate resources to ensure regular maintenance of and timely repairs to all active-transportation infrastructure to promote safety and usage. Understand the needs of older drivers, and address these needs through enhanced roadway design and appropriate visibility and nonglare lighting standards. Address older drivers' needs through effective site planning and parking standards. Support and promote increased use of transit by older adults through custom services, rider training, and real-time information.
RECOMMENDATIONS FOR PUBLIC REALM AND PUBLIC SERVICES TO SUPPORT AGING IN COMMUNITY	Understand that the public realm and public services are important aging-in-community issues. Seek multisector partnerships and foster project collaborations and ongoing coalitions as appropriate. Educate 311 operators, emergency responders, utility workers, and other service providers about local older-adult issues and resources and the importance of being sensitive to the needs of older adult callers. Support and promote existing community-based human service providers and programs. Look for new efficiencies in public service provision by coordinating existing programs to meet the needs of older adults more efficiently and by modifying the programs, when feasible, to better address unmet needs.	Look for linkages between planning and public health in policy and program development, and integrate these fields programmatically when possible. Work to influence a range of non-older-adult-focused public realm enhancement programs to maximize their aging-supportiveness potential. Nurture "third spaces" and other important sites and facilities that build social capital and foster aging-supportive communities. Understand community connectivity, walkability, and accessibility as integral for aging-supportive communities and as more than merely transportation issues. Look for and support appropriate opportunities for joint uses of community assets and facilities, leveraging scarce resources whenever possible. Embrace new technological applications and platforms as appropriate to support aging in community. Look for appropriate opportunities to utilize the potential of "big data" resources to make better programmatic and resource investment decisions that can help enhance aging supportiveness.

TABLE 6.1. AGING-IN-COMMUNITY RECOMMENDATIONS BY TYPE (CONTINUED)

	General Strategic/Process Recommendations	Specific Project/Program Recommendations
RECOMMENDATIONS FOR PLANNING AND IMPLEMENTING AN AGING-SUPPORTIVENESS PROGRAM	Review existing aging-supportive community programs to identify what is most appropriate for the community and avoid adopting existing programs or protocols for the wrong reasons (such as name recognition or political or funder pressure). Develop extensive partnerships (beyond simply public shows of support) involving the aging network, particularly the regional area agency on aging; planning organizations, such as the regional metropolitan planning organization; and corporate, small business, nonprofit, faith-based, educational, civic, and professional organizations. Identify political and other powerful champions without aligning too closely with specific political champions or their agendas, as they may someday be gone. Engage older adults in substantive ways throughout the process. Avoid focusing too heavily on assessment and data analysis, particularly if this information will not energize the general public or potential partners. Identify and secure funding for the entire multiyear planning-implementation-analysis process. Educate the broader community and reach out to new partners continuously. Remember that the goal is providing aging-supportive communities throughout people's lifetimes rather than measures that just benefit older adults.	Build upon and leverage the community's existing human, organizational, locational, cultural, and infrastructure assets. Translate recommendations into actions, and focus on incremental implementation and the identification of roles, responsibilities, and deadlines. Focus on early and low-cost momentum- and coalition-building victories. Leverage existing projects and activities and strive to share in victories.

Source: Bradley H. Winick, AICP, LEED

ongoing discussion on aging supportiveness, can existing livability or sustainability agendas be broadened to also include aging supportiveness?

The path to creating aging-supportive communities for everyone may not be easy, but the urgency is growing, particularly as demographic, institutional, and societal shifts occur in domains such as aging, health care, transportation, and municipal finance. The time to begin planning an aging-supportive community—if that process is not already underway—is now.

APPENDIX A: ADDITIONAL RESOURCES

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APPENDIX B: LINKS TO PROGRAM WEBSITES

AARP Livable Communities (Washington, D.C.)
www.aarp.org/livable-communities

AccessoryDwellings.org (Portland, Ore.)
http://accessorydwellings.org

AdvantAGE Initiative, Center for Home Care Policy and Research (New York City)
www.vnsny.org

Age-Friendly New York City (New York City)
www.nyam.org/agefriendlynyc

Age-Friendly Philadelphia (Philadelphia)
www.pcaagefriendly.org

Age-Friendly Portland (Portland, Ore.)
http://agefriendlyportland.org

Aging in Place Initiative, Partners for Livable Communities (Washington, D.C.)
www.livable.org/program-areas/livable-communities-for-all-ages-a-aging-in-place/the-aging-in-place-initiative

Aging Initiative, U.S. Environmental Protection Agency (listserv)
www.epa.gov/aging/resources/listserv.htm

Aging Your Way (Seattle)
www.seniorservices.org/agingyourway

Ateaze Cycling Seniors, Ateaze Senior Center (Baltimore)
www.baltimorecountymd.gov/Agencies/aging/centers/cyclingseniors.html

CarFit, Parkway Senior Center (Utica, N.Y.)
www.seniortransportation.net/ResourcesPublications/Carfit.aspx

Centers for Disease Control and Prevention, Older Adult Drivers (Atlanta)
www.cdc.gov/motorvehiclesafety/older_adult_drivers

Communities for a Lifetime (Florida)
www.communitiesforalifetime.org

Communities for All Ages (Philadelphia)
www.communitiesforallages.org

Community AGEnda, Grantmakers in Aging (Arlington, Va.)
www.giaging.org/programs-events/community-agenda

Community Innovations for Aging in Place (nationwide)
www.aoa.gov/AoA_programs/HCLTC/CIAIP

Deikel Transportation Services (Minnetonka, Minn.)
www.jfcsmpls.org/our-services/adult-services/deikel-transportation-services

Gaylord Community Schools (Gaylord, Mich.)
www.gaylordschools.com

GenPhilly (Philadelphia)
www.genphilly.org

Grantmakers in Aging (Arlington, Va.)
www.giaging.org

Hope Meadows, Generations of Hope (Rantoul, Ill.)
www.generationsofhope.org

Housing Assistance Program of Essex County (Essex County, N.Y.)
http://hapec.org

Insurance Institute for Highway Safety, Older Drivers (Arlington, Va.)
www.iihs.org/iihs/topics/t/older-drivers/topicoverview

Intergenerational Center, Temple University (Philadelphia)
http://templeigc.org

Kansas City Public Schools Repurposing Initiative (Kansas City, Mo.)
http://www.kcpublicschools.org/repurposing

KC Communities for All Ages (Kansas City Region, Kansas and Missouri)
www.marc.org/Community/KC-Communities-for-All-Ages

Keoweecares (Salem, S.C.)
www.seniortransportation.net/ResourcesPublications/Keowecares

Kindness, Inc. (Mountain Home, Ark.)
www.seniortransportation.net/ResourcesPublications/Kindess

Lifelong Communities (Atlanta)
www.atlantaregional.com/aging-resources/lifelong-communities

Livable Communities Collaborative, National Association of Area Agencies on Aging (Washington, D.C.)
http://www.n4a.org/livable

MY RIDE Dallas (Dallas County, Tex.)
http://myridedallas.org

myride2, Area Agency on Aging1-B (Southfield, Mich.)
www.myride2.com

National Association of Area Agencies on Aging (Washington, D.C.)
www.n4a.org

National Center for Mobility Management (nationwide)
http://nationalcenterformobilitymanagement.org

National Center on Senior Transportation (Washington, D.C.)
www.seniortransportation.net

National Institute on Aging, Older Drivers (Bethesda, Md.)
www.nia.nih.gov/health/publication/older-drivers

National Institutes of Health, Older Drivers (Bethesda, Md.)
http://nihseniorhealth.gov/olderdrivers/howagingaffects driving/01.html

National Resource Center on LGBT Aging (New York City)
www.lgbtagingcenter.org

NORC Aging in Place Initiative, Jewish Federation of North America (nationwide)
www.norcs.org

Olene Walker Housing Loan Fund (Utah)
http://jobs.utah.gov/housing/owhlf

On the Radar: Aging and Livable Communities, American Planning Association (Chicago)
www.planning.org/resources/ontheradar/aging

Penn South Program for Seniors (New York City)
http://pennsouthlive.org/about-us/about-psps

People St (Los Angeles)
http://peoplest.lacity.org

Planning Across Generations, Cornell University (Ithaca, N.Y.)
www.mildredwarner.org/planning/generations

Program of All-Inclusive Care for the Elderly (PACE) (Fairfax, Va.; nationwide)
www.inova.org/inova-in-the-community/inovacares-for-seniors-pace-program

Project Independence (Town of North Hempstead, N.Y.)
www.tonhprojectindependence.net

Ride Connection (Portland, Ore.)
www.rideconnection.org/ride

Senior Farmers' Market Nutrition Program (Reno, Nev.)
http://commodityfoods.nv.gov/SFMNP/SFMNP-Senior_Farmer_s_Market_Nutrition_Program

Senior Friendly Taxi Driver Certification Program (Knoxville, Tenn.)
www.seniortransportation.net/ResourcesPublications/Setting aVoluntaryStandardforTaxicabDrivers

Shared Housing Center (Dallas)
www.sharedhousing.org

Support and Services at Home (SASH) (Vermont)
www.sashvt.org

The Green House Project (Arlington, Va.)
http://thegreenhouseproject.org

Transportation Network Directory (Montgomery County, Md.)
www.montgomerycountymd.gov/hhs-program/resources/files/a%26d%20docs/transportationoptionsforseniorsandpwd.pdf

TRIP Program (Riverside, Calif.)
http://ilpconnect.org/trip-riverside

United We Guide, Florida Department of Transportation (Florida)
www.seniortransportation.net/ResourcesPublications/United WeGuide

Village to Village Network (St. Louis, Mo.)
www.vtvnetwork.org

Wolf Creek Lodge (Grass Valley, Calif.)
http://www.wolfcreeklodge.org

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ACKNOWLEDGMENTS

We would like to thank **Andrew Shook**, a graduate research assistant in the Department of Urban Planning and Policy at the University of Illinois at Chicago during the 2013–14 academic year, who assisted in researching much of the information presented in the transportation chapter of this report.

We would also like to thank the following individuals who reviewed a draft of this report and provided valuable feedback: **Mitzi Barker, FAICP**, Rural Alaska Community Action Program; **Alan DeLaTorre**, Portland State University; **Wendy Fox-Grage**, AARP Public Policy Institute; **Esther Greenhouse**, Esther Greenhouse, LLC; **Rodney Harrell**, AARP Public Policy Institute; **Laura Keyes, AICP**; **Jana Lynott, AICP**, AARP Public Policy Institute; **Ramona Mullahey**, Center for Better Communities; **Jennifer Raitt**, Metropolitan Area Planning Council; **Kathy Sykes**, U.S. Environmental Protection Agency.

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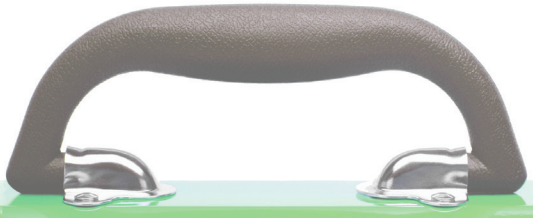

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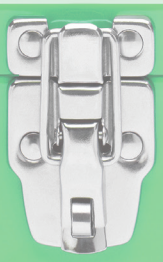

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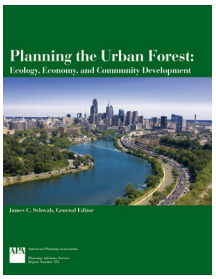

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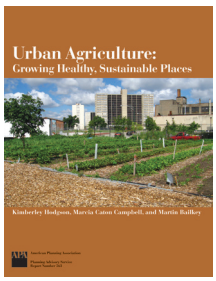

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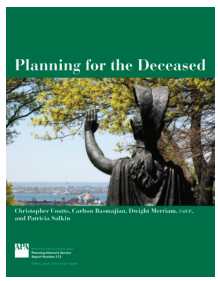

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