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Longer life, and the larger numbers of older people today and in future years, poses many challenges for public policy. The policy agenda is crowded. Issues must compete for public attention and resources. Today the aging policy agenda is focused primarily on healthcare costs and retirement. Indeed, access to medical services and the affordability of therapeutic treatments in our extended years are vital to healthy aging. Likewise, having adequate financial resources to afford longer life is equally crucial to families and society.

However, longer life, combined with vastly different personal expectations and social structures, presents far more issues than we have confronted in previous generations. Individuals, policy makers, and business must think beyond health and retirement to include all those services and supports that are the infrastructure of daily living. Examples include communications, housing, centers of learning, community design, community service delivery, a reengineered workplace, and transportation. To meet the needs of an aging society, most, if not all of these will have to be modified.

Transportation, Quality of Life, and Active Aging

Transportation—like electricity—is an element of daily life that we ignore or forget until it is not available. Yet, before you can do anything, you have to get there first. In its most basic form, transportation is the ability to travel from point A to point B. However, it is much more.

Older adults are usually quite clear about how they perceive transportation. Multiple studies report that older adults see the capacity to go from one place to another, when they want and how they want, as embodiment of personal freedom and independence. Likewise, not having transportation on demand is frequently associated with words like "handicapped" and "disabled" (Coughlin, 2001). Beyond what people "feel," some research suggests that the ability to stay connected to friends and community is an important element to physical as well as mental health (Marottolli, etal. 1995).

To people of all ages, transportation becomes the glue that makes all the little and large activities of a quality life possible. For older adults, it is the means to access basic necessities such as healthcare and food shopping. Equally vital to a person's quality of life, however, is transportaiton that is made up of the trips that are not often recognized as "critical" in the classic sense. Healthy aging, not just longer life, is the capacity to visit a friend, to see a movie, decide in the morning to get a haircut, to see a grandchild, or to simply get out. Older adults lead increasingly active lifestyles. Many pursue part-time work, continuing education, and a wide variety of social activities. For example, much of the volunteer workforce in the United States is comprised of older adults. Moreover, today's older adult population enjoys generally improved health, increased education and greater incomes than their parents and grandparents before them. Simply stated, if a person has relatively good health, a wider range of interests due to formal education or life experience and the resources to pursue those interests, it is very likely that there will be increased levels of activity and demand for the mobility to participate in life. The next wave of retirees, the aging baby boomers, have indicated in multiple surveys that they intend to be even more active than their parents.

How Older America Moves

The new lifestyle of healthy aging adults will depend upon a safe, seamless, and responsive transportation system that includes all modes—driving, public transportation, walking, and other mobility alternatives. Figure 1 displays the percentage of trips made by older adults by car, public transit, walking, or other modes in urban, suburban and rural areas.

Driving for Life

In the United States, transportation for all ages is defined as driving. Like their children, older adults overwhelmingly choose the automobile as their primary mode of transportation. As revealed by the U.S. Department of Transportation (USDOT) 1995 Nationwide Personal Transportation Survey (NPTS), over 80 percent of people age 65+ choose to drive or ride as a passenger in a car to make a variety of trips, including shopping, medical, family or personal business, religious activity, and recreation. Rosenbloom (1999), Burkhardt (1998), and other researchers have noted that the increase in licensing patterns among older adults, as well as increased trip making by automobile, are indicative of continued and growing reliance on the car. Baby boomers who have grown up with the car are

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likely to be even more wedded to the automobile for mobility in the future than were their parents.

Driving throughout the lifespan is not without difficulty. The natural aging process may make driving increasingly difficult for some. Yet, chronological age is not a perfect indicator of who is an older driver. For example, older eyes may make night driving less inviting. A driver at age 40 may need 20 times more light to see at night than a driver at age 20. Few would want to identify a 40-year-old as an older driver. Likewise, recovery from the glare of headlights can make driving more difficult for the mature driver.

Decreased strength and flexibility by age 50 can make getting in an out of a car more of a challenge or rotating the neck fully to see on-coming traffic more problematic. Arthritic hands may limit manual dexterity, making manipulation of small knobs and buttons difficult. For some, slowed information processing deficit due to the natural aging process or the use of multiple medications may make the capacity to safely divide attention between competing driving tasks more difficult.

The older driver is a mainstay of transportation discussion in the media and intermittently on the policy agenda. Typically triggered by accidents involving an older driver, there is media attention on the "safety" of older drivers. National statistics indicate the fatality rate of the 75+yearold driver rivals the number of deaths per 100,000 miles driven by drivers between ages 16 and 24. Those seeking restrictions on relicensing older drivers often argue that these data provide evidence that older operators are a danger to themselves and to the public and, therefore, should be removed from the nation's roads. While others, noting that the data present no causal relationship, observe that there is no evidence that clearly explains the fatality rates. The question remains-are older drivers dying because of diminished capacity to drive or because of the inherent frailty of an older person to survive a crash?

Policy responses to the older driver issue are varied and sporadic at best. The debate typically occurs in each state at least once a year. Legislation is proposed usually to increase "older driver testing requirements," (e.g., additional vision testing, road testing, shorter periods between renewals, provisions for restricted licensing, etc.). However, in most states, the initiative fails or stalls. Passionate opposition from older adults combined with waning public attention to the issue and the inherent ambiguity around what is an older driver and what is the best method to identify the *impaired* older driver work to defeat most initiatives. Moreover, the lack of real transportation alternatives to the car (particularly in rural states) makes it incredibly difficult for any elected official to take action in the face of political opposition and policy ambiguity (Cobb and Coughlin, 1997).

Stuck between the "Catch 22" values of personal freedom and public safety, most policy makers choose to take no action. In some states legislation has passed, such as vision testing for people over a certain age, only to have its implementation zeroed out in the annual budget or to face a staggered implementation schedule. Today, less than onethird of the states have some provision addressing older driver relicensing.

Some states have begun to take a more systematic approach to older driver testing and licensing. Florida and Maryland, for instance, are currently developing some innovative testing, education, and counseling strategies. These programs attempt to identify the impaired driver, support the older—but still safe—driver, and assist those that can no longer drive by finding and using alternative transportation. Although promising, these programs are still in the formative and experimental stage and are not ready for nationwide adoption.

Federal actions have been limited to studies, task forces, and formidable outreach events. A series of valuable technical reports on road and signage design have also been developed to help state and local transportation departments modify the road system to assist the older driver. However, despite incremental movement by the states and Federal Government, the national policy governing older drivers rests on self-regulation.

Most older drivers self-regulate, that is they choose to drive only when and where they are the most comfortable. For those with diminished vision, they often choose not to drive at night. Others self-regulate by not driving in poor weather, heavy traffic, or on major highways. In extreme cases, some only drive in their neighborhood to meet the basic mobility needs of living, (e.g., going to the grocery store).

Public Transportation and Paratransit

Figure 1: Percentage of Older Adult Trips by Mode and Region				
TRANSPORTATI ON MODE	URBAN	SUBURBAN	RURAL	
AUTOMOBILE	77.30%	93.70%	94.80%	
AsDriver	54.9	71.7	68.1	
As Passenger	22.4	22	26.7	
PUBLIC TRANSPORTATION	8.5	0.9	0.3	
WALKING/ BICYCLE	13.3	4.6	4.6	
OTHER	0.9	0.9	0.3	

Source: 1995 NPTS as presented in S. Rosenbloom, 1999. *The Mobility of the Elderly: There's Good News and Bad News*, presented at the Transportation in an Aging Society: A Decade of Experience Conference, NIH Bethesda, MD, November 1999. For some, public transportation provides an alternative to the car. Although as Figure 1 shows, less than 10 percent of older adults use public transportation. This is due to travel behaviors developed as younger adults as well as the spatial and service realities of today's public transportation systems. The service area for most transit services is suburb-to-city or city-to-city. In sharp contrast, nearly 70 percent of older adults live in suburban or rural locations, where transit is either non-existent or limited. The absence of truly viable alternatives to the car is most acute in rural regions and tribal lands.

Where public transportation is available, access to traditional transit service can be made difficult due to physical and perceptual limitations. Climbing stairs in a rail station or to board a bus can be as much a barrier as not living near the system at all. Likewise, many older adults express fear of public transportation due to their perception that they may be targets of crime and violence. Research indicates that those older people who did not use public transportation on a regular basis when younger are less likely to perceive it as an alternative to the car and are more likely to be fearful of using it (Blackman, 2000).

Although the physical barriers will generally be eliminated through full implementation of the Americans with Disabilities Act, the spatial and perceived barriers to transit remain. In most cases, paratransit services are used to provide mobility alternatives for those with physical disabilities or for those who live where conventional transit is not available. The regional transit authority, area agency on aging, or community senior center often provides paratransit or demand response services. Paratransit usually takes the form of a van or chair car providing door-to-door services for the elderly and physically disabled. Funding is typically provided by social and health services programs that view transportation as vital to providing their benefits. Financing is most often limited to those trips that support the program's primary mission. Combined with the very high operational costs (sometimes as high as \$17-\$20 per ride), paratransit providers typically prioritize the trips provided to seniors. A sort of mobility triage is performed providing transportation to the doctor or food store with significant limits on their responsiveness to other transportation needs, (e.g., social trips).

The baby boomers have pushed beyond their parents' communities in pursuit of the American Dream where their aging-in-place may present an even greater service challenge to our current idea of public transportation. Unless truly viable and attractive transportation services are greatly expanded or reinvented they will not meet the mobility needs of older adults who do not, or who no longer, drive. **Walking**

Despite America's love affair with all that moves, the human body's original equipment remains remarkably useful. As Figure 1 indicates, walking remains the second most popular mode of transportation. Particularly in urban areas where the proximity of stores, friends, and services make walking a real option, nearly 13 percent choose to walk when making a trip. However, policies to support this healthy choice are not being uniformly considered throughout the United States.

Older adult accidents top the list of pedestrian fatalities in the nation. Traffic safety issues surrounding the design and construction of cross walks, curb cuts, and traffic signalization are key to making walking a safe and viable option. For example, the standard guide to setting the timing at cross walks with traffic signals is often more attuned to the speed of a freshman in college than a senior member of the community. Likewise, benches and shaded areas to rest while walking or traveling to and from a transit line are an integral part of enabling older people to remain independent in their own neighborhoods.

Perhaps the greatest impediment to walking is local ordinances that were originally implemented to "enhance" the quality of life and aesthetic value of suburban neighborhoods. For example, zoning that requires large lots makes distance the greatest barrier to walking. Similar to many rural areas, walking in suburbia is an exercise not a mode distances are becoming so great and land use so segregated between housing and retail development that walking to accomplish any task is becoming nearly impossible. Moreover, in many newer suburban developments, sidewalks have been "zoned out" in an attempt to maintain as much of a pastoral surrounding as possible. Unfortunately, while such measures may improve selected aesthetic values, they may significantly limit lifelong mobility and independence.

Transportation Challenges for an Aging Society

The United States is an incredibly mobile nation. Our culture values the individuals' ability to move when, wherever, and however they wish. Older age was once characterized as a time of idleness, isolation, and illness. Today's older adults and soon their children are reinventing old age. People have greater expectations of what they will do with their longer lives, and society has social and economic interests in keeping all of its members as independent and productive as possible. Transportation is a vital part of healthy and productive aging. Consequently, it must become an equal partner with the traditional issues of health and income security on the aging policy agenda.

Transportation is vital to individual well-being and quality of life. Previous research indicates that driving cessation often spirals down into depression and is often a precursor to physical illness. This results in a high cost to individuals, families, and eventually to society in the form of additional healthcare expenditures and premature institutionalization. For example, the number one alternative to the car for older adults is not another mode; rather, it is riding with family members and friends. Time taken from work, to ensure that one's mother is able to have her hair done or to take a father to the doctor are personal costs to the family, but also with economic implications for industry and society.

Transportation is a key component to the nation's social contract with individuals and families. Most older people

have worked hard to attain the American Dream—a house, a yard, and the independence to age-in-place where one has paid their mortgage and made their memories. For most, this dream has been realized in the suburbs where an integral part of this lifestyle is predicated on driving (or at least the availability of seamless mobility) to meet the needs *and* desires of daily living. The loss of the driver's license or the reliance on self-regulation for safe and responsive mobility has the potential to turn decades of work to achieve the American Dream into a sentence of virtual house arrest and isolation.

Unlike some policy changes that might be undertaken in a short time with adequate funds, transportation innovation takes time. Change to the transportation infrastructure or to the automobile itself takes years and in some cases decades to implement and realize. For example, technological innovation to enable older drivers to drive longer safely may take at least 10 years in the case of where the majority of the nation's vehicle fleet has a particular warning system or vision assistance device.

Likewise, construction of new public transportation facilities or the development of a new concept in suburban or rural mobility may take more than 10 years to fully develop and implement. Consequently, even if we had a comprehensive transportation strategy in hand today, the nation might miss adequately responding to the transportation needs of the first wave of the nearly 77 million aging baby boomers.

Consequently, a personal and public discussion on lifelong transportation must take place. The U.S. Department of Transportation recently completed a draft strategy on the transportation needs of an aging society. This along with tools and resources provided by the Federal Highway Administration, Federal Transit Administration, and the National Highway Traffic Safety Administration are a helpful beginning, but alone they are incomplete.

There is an urgent need for individuals, industry, and all levels of government to consider how they might contribute to lifelong transportation, where a full range of mobility of options are available to all people of all ages.

• Individuals and families should be provided with the educational materials and the incentives to plan for the day when driving may not be a comfortable or safe option. Planning only for our health and financial independence is just short of meaningless if you are isolated and alone.

• The automobile industry should be provided with research and development incentives to make a focused effort to understand how new technologies will affect and benefit an older driver while still manufacturing a car that is attractive to consumers of all ages. Similarly, others in the private sector should be provided with the incentives necessary to develop a wide range of services, including transportation, to meet the lifestyle of the active aging.

• Activists and policymakers alike should use the periodic fervor and passion that surrounds the issue of older driver relicensing as an opportunity to ignite debate on why there are so few viable and attractive transportation alternatives to the car. Policy discussions that focus on only the older driver fail in addressing the real question of mobility and independence as well as the sustainability of our current choices in urban form and community design for young and old.

Challenges and Opportunities to Developing a Policy of Lifelong Transportation

Transportation for older adults has been symbolically on the aging agenda for many years. In the last decade several notable activities have occurred. At the 1995 White House Conference on Aging, where under the goal of "social wellbeing," the Conferees adopted *Resolution 30: Maximizing Transportation Choices* which sought more resources, research, and liability protection to:

ensure accessible low-cost transportation for older persons and persons with disabilities...as well as cost sharing by individuals (The Road to Aging Policy for the 21st Century, Executive Summary, February 1996, 1995 White House Conference on Aging, Washington, DC, pg. 108).

Figure 2 lists key activities and actions of the White House, U.S. Department of Transportation, U.S. Department of Health and Human Services, and the National Academies Transportation Research Board over the last 12 years. Each, often in collaboration, has conducted considerable research, demonstration, and regulatory change in an effort to meet the transportation needs of older people. However, without real national entrepreneurial leadership,

0	re 2: Federal Policy Activities Supporting sportation for an Aging Society, 1988-2001
1988	Transportation Research Board Special Report 218: Transportation in an Aging Society
1989	"Moving America" Policy Outreach (DOT)
1990	American with Disabilities Act (ADA) National Transportation Policy—"Moving America" Nationwide Personal Transportation Survey
1991	Intermodal Surface Transportation Efficiency Act
1992	Older Americans Act Reauthorization (OAA)
1995	White House Conference on Aging: <i>Choices for Our Future Report</i> Nationwide Personal Transportation Survey
1996	Improving Transportation for a Maturing Society
1997	White House National Science and Technology Council: Transportation Science and Technology Strategy
1998	Transportation Equity Act for the 21 st Century (TEA-21) Mobility and Independence: Changes and Challenges for Older Drivers
1999	National Agenda for the Transportation Needs of an Aging Society TRB Conference Transportation in an Aging Society: <i>A Decade of Experience</i>
2000	Planning Guidelines for Coordinated State and Local Specialized Transportation Services Reauthorization of the OAA

these actions have remained largely symbolic. None has resulted in significant change in how the issue is administered by the Executive Branch, nor has Congress been persuaded to allocate meaningful resources for innovation at the local, state, and Federal levels of government. Moreover, no concerted effort has been made to influence the behavior and personal planning of individuals to manage their own mobility needs throughout the lifespan.

The greatest challenges to placing transportation on the national aging agenda are both institutional and political. The number and diversity of committees and agencies involved in legislating and administering aging policy confound a systematic approach to any policy area. Transportation for the elderly is typically masked behind some other policy goal, (e.g., medical transportation). Consequently, it never fully attains serious and sustained attention in Congress.

Moreover, at the Federal and state level, it is unclear what agency is responsible for transportation. Aging agencies are interested, but their stakeholders' first priority is the delivery of social and health services. Likewise, transportation agencies are typically empowered to build, finance, or operate a system. Special populations, such as the elderly, reduce the efficiencies of running a licensing bureau or a transit system, increasing costs and posing systematic problems in operations and human resources.

The policy process has a structured bias limiting the entrance of new issues onto the agenda. Competition with existing problems such as healthcare costs and financial security take up both space and political capital. There is often not enough oxygen left after these two policy goliaths to feed debate on another issue (Cobb and Elder, 1983).

Most obvious, however, is the absence of a powerful pressure group or issue entrepreneur who has been willing to place lifelong transportation at the top of their agenda. In the absence of such an organization or leader, issues must be "discovered" through events that force public and policy makers to focus on the problem. Unfortunately, transportation for an aging society is not likely to benefit from such an event. Even horrific traffic accidents are local news that neither receive nor sustain national attention. The aging of the population moves at a glacial speed seemingly compelling no immediate action. Like a glacier, however, once it arrives it is far greater a problem then could have ever been anticipated. Safe and responsive transportation is the enfranchisement to participate fully in life. Now that we have invested billions to live longer, we must now invest and take action to invent how we will live. National political and policy leadership is necessary to bring attention to transportation and to the other pillars of healthy and productive aging that will compel us to think beyond health and retirement.

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