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The Health Status and Unique Health Challenges of Rural Older Adults in California

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SUMMARY: Despite living in the countryside where open space is plentiful and there is often significant agricultural production, rural older adults have higher rates of overweight/obesity, physical inactivity and food insecurity than older adults living in suburban areas. All three conditions are risk factors for heart disease, diabetes and repeated falls. This policy brief examines the health of rural elders and, by contrast, their urban counterparts, and finds that both groups

are more likely to be unhealthy than suburban older adults. Yet rural elders, because of their geographical isolation and lack of proximity to health care providers, experience unique environmental and other risk factors that require context-specific solutions to these health issues. In both policies and programs that impact health, policymakers need to take into account the distinctive environmental and social context of older adults living in California's countryside.

“Almost one in five older California adults live in a rural area.”

Almost one in five California adults age 65 and over (18.2% or about 710,000 seniors) lived in a rural area in 2007. A rural area is defined as a nonmetropolitan area with fewer than 950 persons per square mile.¹ The low population density of rural areas creates special challenges for addressing the health needs of rural seniors. Using data from the 2007 California Health Interview Survey (CHIS 2007), the social characteristics, health risks and health conditions of older adults living in rural areas are examined and contrasted with older adults in both urban and suburban areas. We then identify policies that more specifically address the health needs of rural older Californians.

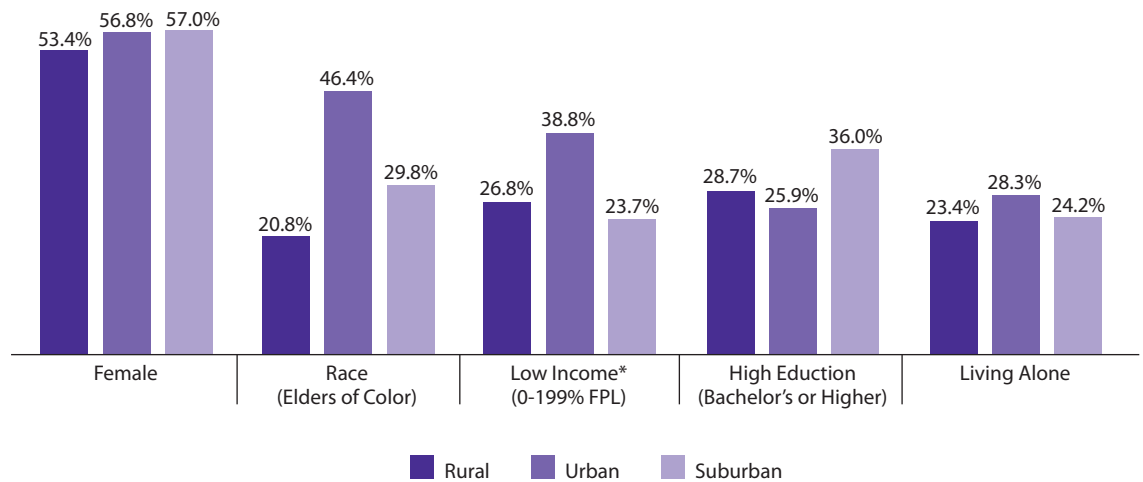
Older adults in rural California are less likely to be female (53.4%) and less likely to be of a racial/ethnic minority (20.8%) compared to

older adults in other regions. Rural older adults are somewhat more likely to have low incomes (26.8%) than suburban older adults, but both groups have lower rates of poverty than urban elders. High education levels are more similar between rural and urban areas (28.7% and 25.9%, respectively), which are both lower than suburban rates. Rural and suburban older adults are also less likely than urban elders to live alone (Exhibit 1).

Although the demographic characteristics between rural and urban elders often vary, they share common contextual factors that may impact their resulting health risks and health conditions. Both regions experience more problems than suburban areas with access to food outlets, parks, exercise facilities and health care sites. Limitations in the physical environment can lead to difficulties

Exhibit 1

Adults Age 65 and Older Residing in Rural, Urban and Suburban California by Selected Demographics, 2007



* Low income is family income below 200% of the federal poverty level in the previous year; \$26,400 for a couple in 2006.

Source: 2007 California Health Interview Survey

“A majority of older rural adults are overweight or obese.”

in maintaining health and obtaining appropriate care for aging adults in both rural and urban areas.

Overweight/Obesity and Physical Inactivity Are Highest for Rural Elders

Obesity and not being physically active are risk factors for a number of common chronic conditions, including heart disease, diabetes and disability. Older adults in rural areas are more often overweight or obese (61.3%) than their urban and suburban counterparts (Exhibit 2). Among all older adults, 21.3% of rural elders are obese, compared to 20.2% of urban elders and 18% of suburban elders (data not presented). After taking into account the demographic characteristics that are associated with overweight and obesity, rural elders are still more likely to be overweight and obese than urban and suburban older adults.²

One potential contributor to the high rates of overweight and obesity among rural elders is

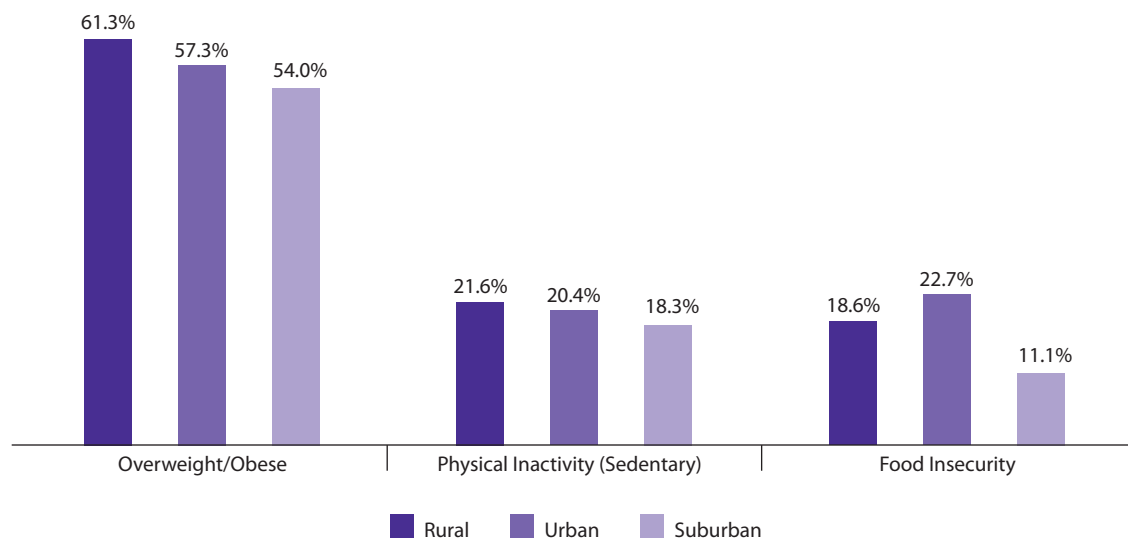
the high levels of physical inactivity, with one in five of rural elders not participating in either moderate or vigorous activity in their leisure time. Suburban elders meanwhile, are the least likely to be physically inactive. Physical inactivity among the aging population can also contribute to other health problems, including physical disability, heart disease, diabetes and falls.³ Rural residents face several common barriers to being physically active, including a lack of sidewalks, street lights and exercise facilities.⁴

High Risk of Food Insecurity for Rural and Urban Elders Alike

Low-income older adults in both rural and urban areas have high rates of food insecurity, where about one in every five low-income older adults reports that they cannot consistently afford enough food to last the month. This rate is about twice that of the one in ten low-income suburban adults who are food insecure (Exhibit 2). The rural and urban rates are statistically similar when

Health Risk Factors of Older Adults in Rural, Urban and Suburban California, 2007

Exhibit 2



Note: Food Insecurity is only asked of those with incomes at or below 200% of the Federal Poverty Level.

Source: 2007 California Health Interview Survey

adjusted for demographic differences using statistical analysis.²

Food insecurity may result from insufficient income, lack of stores with affordable food and/or a lack of transportation, all of which are common barriers for both rural and urban areas. Food insecurity can also be a contributor to other health problems since it is associated with obesity, diabetes, poor health and increased use of health services.⁵

Key Health Problems: Heart Disease, Diabetes and Repeated Falls

Older adults in both rural and urban areas experience the higher rates of heart disease, diabetes and repeated falls than suburban areas. One-quarter of older adults in rural areas report having been diagnosed with heart disease, while urban elders have slightly lower rates at 22.8%. Suburban elders have the lowest rates of heart disease at one in five (Exhibit 3). Heart disease rates for rural and urban elders are not statistically different once we account for demographic differences,

but continue to be higher than those residing in suburban areas.²

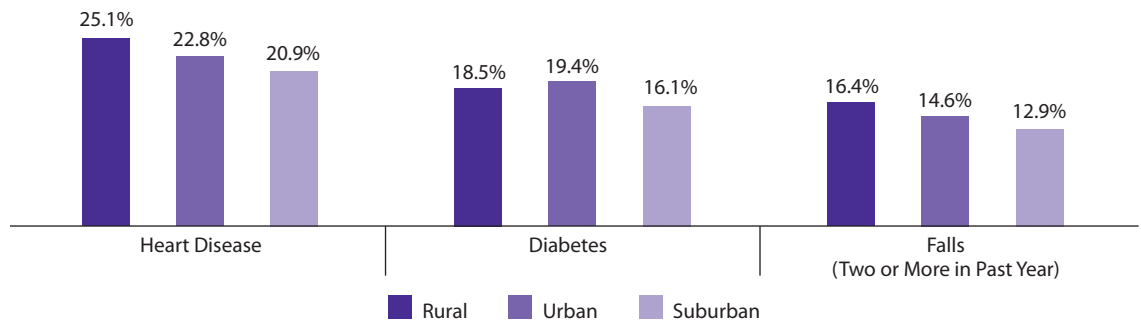
Rural and urban areas have statistically similar rates of diabetes, with at least one in every six older adults reporting the condition. Suburban rates are somewhat lower. Diabetes requires careful medical management since poorly controlled diabetes contributes to a wide range of health problems, including heart disease, kidney disease, amputations and blindness.

Proper diabetes care may be more of a challenge for elders living in isolated rural or urban regions due to difficulties in accessing care. In rural areas this includes limited public transportation, reliance on private vehicles, large geographic distances to services and fewer specialists, along with financial barriers.⁴ Urban residents also experience barriers in accessing care, in particular those living in high poverty areas with limited public transportation, high crime, and few health care facilities and providers. Other research has also begun to document similarities in

“One-quarter of older adults in rural areas report having been diagnosed with heart disease.”

Exhibit 3

Health Conditions of Older Adults in Rural, Urban and Suburban California, 2007



Source: 2007 California Health Interview Survey

“There is funding for safe routes to schools, but safe routes are also needed for seniors.”

the health patterns of rural and urban residents, in particular higher morbidity and mortality rates in comparison to suburban areas.^{6,7}

Repeated falls occur frequently among the aging population and can result in injury and even death. Falls are often preventable with a combination of individual and environmental interventions. In rural areas, one in six older adults has had two or more falls in the past year. The rate of falls is slightly lower for urban elders at 14.6%, while suburban elders have the lowest rate at 12.9%. When adjusting for demographics, rural and urban residents have statistically similar rates of falls, while suburban elders continue to have fewer falls.² Older adults can decrease their risk of repeated falls by being evaluated and counseled by a health care provider, beginning an exercise or physical therapy program, or making changes to their home. Among those who had repeated falls, rural elders are less likely to make adaptive changes to the home (20.3% of rural versus 31.4% of urban and 27.5% of suburban elders), despite higher rates of homeownership among rural residents: 86.4% of rural, 70.9% of urban and 83.4% of suburban older adults own their own homes.

Some health conditions are relatively uniform across rural, urban and suburban areas. Nonetheless, the prevalence in CHIS 2007 of health problems among elders in rural California, like asthma (11.8%), high blood pressure (59.5%) and emotional issues interfering with family life (8.3%), all indicate needs for health and mental health care throughout the state.

Rural populations of all ages nationally experience higher than average rates of illness and poorer access to services.⁷ Factors associated with living in a rural region can result in physical and social isolation, making access to stores, parks, medical care and other services a challenge.^{4, 8, 9} Isolation may be especially problematic for older adults as the need for medical care increases and physical mobility decreases with age. Receiving appropriate care may also be difficult for rural elders with chronic conditions as medical specialists are less likely to practice in rural areas.⁹

Local Planning Can Help Address Physical Activity, Obesity and Falls Prevention

The health of older adults depends on an environment that facilitates their mobility and encourages an active lifestyle. Currently there is funding for safe routes to schools, but

Having Low Incomes Is Harder for Rural Elders

Elders living in rural areas with incomes less than 200% of the federal poverty level face great challenges, often greater than low-income elders in urban or suburban areas. For low-income rural elders, the rates of heart disease, diabetes and repeated falls are significantly higher than low-income suburban elders. More than a quarter of low-income elders in rural areas (28%) have heart disease, compared to 23% in urban and 20% in suburban areas. Diabetes rates jump to 27% for low-income rural elders, higher than the 25% of urban and 21% of suburban low-income elders.

And one of five low-income elders in rural areas has experienced repeated falls, compared to 15% in urban or suburban areas. Additionally, about one in ten of poor rural elders (11.5%) has only Medicare. The lack of Medicaid or a private Medicare supplemental policy can result in high out-of-pocket costs and may serve as a significant barrier to seeking needed care for chronic health conditions. This suggests that having a low income has a particularly strong effect on the health outcomes of older adults in rural areas.

safe routes are also needed for seniors. More densely populated areas of rural regions should consider creating senior walkability plans similar to assessments done in large cities, such as New York's *Safe Routes for Seniors*.¹⁰ Government planning departments could identify routes that seniors often use and make sidewalk adjustments or repairs accordingly. Benches placed along frequent routes allow elders to rest throughout their walk.

The concept of *aging in place* reflects the fact that elders usually prefer to stay in the same homes and communities as they age. Universal design is a set of construction specifications that maximizes mobility and accessibility in homes for all people, regardless of age or physical capacity. Examples of universal design include wide hallways for easy maneuvering, lower cabinet placement and lever-style door handles instead of traditional round doorknobs. Universal design features could be promoted through the incorporation of universal design features in the contract bidding process; incentives, such as fee reductions for contractors who use universal design; low interest loans for home modifications; and tax credits and deductions for new homes and home modifications.¹¹

Falls prevention strategies are most effective when they include multiple components, such as community-based strength and balance classes in accessible senior and community centers combined with home assessments. Local falls prevention coalitions can help streamline and coordinate evidence-based falls prevention initiatives, and may be especially helpful for rural areas where services are often spread out.

Policies to Improve Access to Healthy Food Can Reduce Both Hunger and Disease

Having fresh, affordable and nutritious food nearby can decrease the likelihood of food insecurity, obesity and heart disease for rural elders.¹² Although current policy regarding *food deserts* (areas with few or no stores that stock healthy and fresh food) is designed to increase grocery stores primarily in urban areas, many rural communities also have a dearth of grocery stores due to low population density. In addition, rural grocery stores face challenges such as high operating costs due to low customer volume, thus decreasing access to nutritious foods.¹³ Federal programs (including Rural Business Enterprise grants, the Rural Energy for America Program, the Small Business Innovation Research program,

“Many rural communities have a dearth of healthy food outlets due to low population density.”

“Better incentives are needed to attract geriatric and adult primary care physicians to rural areas.”

and Business and Industry Guaranteed Loans) can be used to support opening new stores in rural areas or support faltering ones, increasing access to healthy foods.¹⁴ These programs should be promoted in rural areas, together with new policies and programs that target the unique challenges of rural food deserts.

Access to transportation is also a challenge for both rural and urban low-income elders. Transportation agencies in rural areas should assure that there are service routes from residential areas to grocery stores. Parking lots of grocery stores should be easily navigable for those who have limited mobility and transportation subsidies provided for able-bodied rural elders to help get them there.¹⁵ Also, when a rural area has an elder-specific nutrition program, transportation to and from a central location should be provided to reduce access barriers.

Expanded Access to Health Care Can Decrease Chronic Health Conditions

Improved access to medical providers will help ensure that rural elders receive proper preventive care and chronic disease management. This may help decrease the incidence of obesity, heart disease and diabetes while also increasing the ability of rural elders to manage existing chronic health conditions.

To increase the number of providers in rural areas, the state and federal government should establish better, more consistent incentives for physicians employed in rural areas who provide geriatric care and adult primary care. Recent federal health care reform has several new opportunities for physician recruitment and retention. Rural communities should be made aware of these opportunities to take advantage of additional federal funding that may be available.

Rural communities need to update and maintain federally-designated Health Professional Shortage Areas (HPSAs),

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) to take full advantage of programs and policies that provide doctors and clinics with additional revenue for visits, and for the funding available to implement electronic medical records in these areas.

Distance barriers facing rural elders can be reduced with the help of the internet for patient self-management, electronic health records and prescribing medications. However, infrastructure and adoption hurdles in rural communities must be addressed, including a lack of broadband infrastructure, an insufficient information technology workforce and difficulty finding vendors. Reimbursement from insurance companies also needs to fully compensate rural providers that use telemedicine. In addition to eHealth and telemedicine, technology can also be used to help patient home monitoring, such as health coaching via telephone and video chatting to address patient illnesses and monitor follow-up care.

Conclusion

Rural elders have more health risks and higher rates of some health conditions than their suburban counterparts, including overweight/obesity, physical inactivity, food insecurity, heart disease, diabetes and repeated falls.¹⁶

Rural areas present challenges that urban and suburban areas do not, such as rugged terrain, precarious road conditions, vast geography, and a sparse and dispersed population. These obstacles can make it difficult for rural elders to obtain medical services, access safe areas to exercise, and have healthful and affordable food options. Goals and policies that facilitate active aging and aging in place should be included in city and county general plan updates. Other policies at the local, state and federal levels also need to reflect the unique solutions that are required in rural areas.



This publication contains data from the California Health Interview Survey (CHIS), the nation's largest state health survey. Conducted by the UCLA Center for Health Policy Research, CHIS data give a detailed picture of the health and health care needs of California's large and diverse population. Learn more at: www.chis.ucla.edu

More research is needed on the unique challenges rural elders face in accessing health care. Documenting the geographic as well as the social isolation experienced by rural elders is important to future planning and policy recommendations.

The policies suggested here are just starting points; there is much more that can be done for rural elders. It is important to highlight that rural communities may need different solutions for the same health issues that also occur in urban areas. In some situations, a *rural-specific* policy may not be necessary; however, it is vital that rural areas are allowed the opportunity to provide input and determine if this is the case. Policies should be flexible enough that they can address problems for every community, regardless of population size and density.

Data Source

The findings are based on the 2007 California Health Interview Survey (CHIS 2007). CHIS 2007 interviewed more than 14,500 adults age 65 or older from households in every county in California. Interviews were conducted in English, Spanish, Chinese (Mandarin and Cantonese), Vietnamese and Korean.

CHIS is conducted by the UCLA Center for Health Policy Research in collaboration with the California Department of Public Health, the Department of Health Care Services and the Public Health Institute. For more information on CHIS, visit www.chis.ucla.edu.

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Endnotes

- 1 We use a rural, urban and suburban measure from CHIS 2007, which assigns a region according to population density using block groups calculated by Claritas, Inc. Urban regions encompass major metropolitan areas and central cities with more than 1,000 persons per square mile. Suburban areas are defined as areas with more than 1,000 persons per square mile but not in an urban area. Rural areas include small towns, less-developed areas near the frontier, and villages surrounded by farmland with less than 950 persons per square mile.
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