Missouri Senior Report

Ahead of the Baby Boom: Missouri Prepares

2006

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Dear Fellow Missourian,

Almost one in five Missourians will be 65 or older by 2020. One of the biggest challenges we face in Missouri, and across the nation, is having relevant data in a centralized report that allows policy leaders and the private sector to prepare for the older population's needs. Welcome to the first edition of *Missouri Senior Report: Ahead of the Baby Boom: Missouri Prepares*. This document will shape our decision-making and help our communities prepare.

The phenomenal growth of the older population in Missouri and around the world is driving some of the most significant social and economic developments of our time. In the face of this transformation, past responses to aging and past perceptions of older adults no longer work. Aging itself is rapidly evolving, forcing us to rethink what it means to grow old. Strategic and visionary planning are vital to ensuring that resources will be available to serve the needs of our ever growing and changing senior population.

As your elderly advocate, I applaud the Department of Health and Senior Services and the University of Missouri Office of Social and Economic Data Analysis for their collaboration to make this comprehensive report a reality. This report helps us reassess our efforts to meet the current needs of older adults and reaffirm our commitment to work toward a better future for them.

Sincerely,

Peter Kinder
Lieutenant Governor

Dear Fellow Missourian,

Today's older Americans and Missourians are dramatically different from previous generations. They're better educated and living longer. While some are experiencing healthier lives, many remain challenged by chronic diseases, as well as economic and social concerns. These differences are accelerating as the first baby boomers hit retirement age and are highlighted in *Missouri Senior Report: Ahead of the Baby Boom: Missouri Prepares.*

Now Missouri businesses and policymakers can learn about the diverse and dynamic seniors in their communities all in one report. They can even track the trends of aging Missourians county by county.

The Department of Health and Senior Services and the University of Missouri Office of Social and Economic Data Analysis partnered to bring you this data on Missouri seniors never before centralized in one document. We knew it was imperative that Missouri policymakers and businesses be able to track the trends of seniors in their own communities and counties rather than rely on national aging statistics.

This report is a first in our state and the catalyst for more to come. We look forward to future collaborations and the limitless opportunities that an ever changing and expanding senior population brings to Missouri.

Sincerely,

Julia M. Eckstein
Director

Acknowledgements

The Missouri Senior Report: Ahead of the Baby Boom: Missouri Prepares is a collaborative effort of the Missouri Department of Health and Senior Services (DHSS) and the Office of Social and Economic Data Analysis (OSEDA) at the University of Missouri-Columbia.

Funding was provided by AARP, Deaconess Foundation, DHSS, Missouri Hospital Association, and OSEDA.

DHSS and OSEDA acknowledge the assistance of the ten Missouri Area Agencies on Aging that hosted 47 town hall meetings throughout the state in the fall of 2005. Approximately 500 individuals participated in these meetings and provided essential input for the development of the information contained in the report.

The University of Missouri – Columbia Interdisciplinary Center on Aging contributed resources to communicate the findings of the report through video and other materials.

The Missouri Senior Report Advisory Committee also provided valuable guidance in developing the report. The agencies and organizations represented on the Committee include:

Foundation on Aging

Missouri Alliance of Area Agencies on Aging

Missouri Association of Local Public Health Agencies

Missouri Department of Economic Development

Missouri Department of Elementary and Secondary Education

Missouri Department of Health and Senior Services

Missouri Department of Higher Education

Missouri Department of Mental Health

Missouri Department of Social Services

Missouri Department of Transportation

Office of Social and Economic Data Analysis

Office of the Lieutenant Governor

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University of Missouri-Columbia

Washington University

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Introduction

Missouri is on the edge of an important demographic change—soon a much larger proportion of our population will be older. Aging baby boomers and increases in life expectancy are likely to cause the proportion of Missouri's senior population to rise from about 10 percent today to approximately 15 percent by 2010, and over 18 percent by 2020. The increasing number of seniors will impact many aspects of our lives, including the nature of the demand for health care, housing and transportation. Our current understanding about workforce requirements and the very notion of "retirement" may change. The Missouri Senior Report provides information to respond to these changes.

The report presents a summary of comparative information about key aging issues for Missouri. Trend data is available for eight indicators. Statewide, Missouri is improving on four indicators, declining on three and shows no change on one. Improvements are noted in workforce participation, transportation, health care access, and crime. Declines occur for measures of health status and long-term care. The economic well-being indicator for seniors shows no change. Trend data for an important senior indicator, social participation, is not yet available.

However, these trends affect Missouri communities in different ways. Demographically, Missouri is a very diverse state. The county populations range from over a million in St. Louis County to fewer than 2,300 in Worth County. Also, population characteristics and economic trends differ a great deal among Missouri's large cities, suburbs and rural communities. Consequently, the growth of the senior population is likely to have different implications for different communities.

To address this diversity, the report presents information for each Missouri county. The purpose is to provide summary information about important aging issues in a comparative framework. Communities may then consider how demographic changes influence their local needs. The report ranks each county on outcome indicators and also includes an overall county composite rank—a summary index of the overall well-being of seniors by county. To place these annual outcome measures in context, a set of "status indicators" on demographics, quality of life and wellness are included for each county.

As communities learn to accommodate to aging trends, they will confront specific challenges and opportunities. The indicators in the report will be used to track the direction of change.

The report includes brief articles on the status of Missouri seniors regarding transportation, mental health and health disparities. Resources of interest to seniors are also listed.

Development and Structure of Senior Report Indicators

The report presents a relatively small set of comparative indicators for each Missouri county. The objective is to present a brief snapshot of important indicators annually. The choice of a small set of indicators and measures was challenging. Nearly 500 Missourians provided advice at regional meetings in the fall of 2005 about which aging-related issues to include and how to structure the report. They made suggestions about how to measure the issues and emphasized that the county summary should be kept to a single page of measures that could be reviewed annually. An advisory committee provided insight about the final selection of indicators. The Web site (www.missouriseniorreport.org) includes additional information and graphics. Further refinements in these measures will be made in the future and analyses added to the Web site.

The outcome and status measures were derived from reliable sources and tested for statistical reliability and validity. Measures were reviewed for 'face validity', or the meaningfulness of the indicator to describe counties across time and comparatively. Each outcome measure was reviewed to ensure a sufficient number of cases were available per county to yield a reasonable estimate, and to ensure the distribution of the estimates among counties was relatively normal. Measures of statistical significance are available on the Web site. The composite county ranking is based on the sum of the standardized values for eight of the outcome measures. It represents an overall measure of well-being of seniors. The purpose of the ranking is to help focus improvement on local factors that contribute to the quality of life of Missouri seniors.

The report is organized around two types of indicators: "outcome" and

"status" indicators. Outcome indicators seek to measure progress over time and are designed to reflect efforts to improve outcomes for seniors. They normally involve trend data. For each outcome indicator, a county receives a rank, which contributes to its overall outcome ranking. Status indicators present demographic, quality of life and health status measures for a single point in time. They are intended to provide background and contextual information for the interpretation of outcome measures.

Outcome Indicators

Household Composition

The 2000 U.S. Census indicates Missouri had a relatively large proportion of seniors living in single person households. Seniors who live with someone are less likely to be socially isolated and may have help with many issues. Consequently, household composition is an important indicator for seniors' well-being. Because census measures of single person households are not available annually, the percent of seniors filing joint income tax returns was used to gauge household composition. Between 2000 and 2005, the percent of seniors filing joint income tax returns remained stable, ranging between 44.8 and 44.3 percent, respectively. In 2005 the percent of seniors filing joint returns ranged from a high of 58.1 percent in Washington County to a low of 28.9 percent in Knox County.

Economic Well-being

Economic well-being for seniors can be measured by the percentage of seniors living in poverty. In 2000 the poverty rate for Missouri seniors was 9.9 percent, as compared to 10.9 percent nationally. Census poverty estimates for the senior population are not available annually; however, estimates as to how many low-income people and seniors receive Supplemental Security Income (SSI) are. The Bureau of Economic Analysis provides these annual estimates. Therefore, a relative index of economic well-being was created by calculating the SSI payment as a percentage of total personal income. In Missouri, overall SSI payments represent one-third of one percent of total personal income. By county, this index of economic well-being ranges from a high of 1.8 percent in Pemiscot County to a low of under one-tenth of a percent in Platte and St. Charles Counties.

Workforce Participation

Senior participation in the workforce may be viewed as either an adverse or positive outcome. An adverse view may result if seniors work because they are strapped for cash and would prefer to be fully retired. If, however, workforce participation is the result of an increased availability in service and retail jobs that are less physically demanding than other jobs, and if seniors want to remain economically and socially engaged, the outcome can be positive. On balance, the advisory committee views an increase in senior workforce participation as positive. Senior participation in the Missouri workforce increased from 9.8 percent in 2001 to 10.9 percent in 2004. By county, senior participation in the workforce ranged from a low of under one percent in Douglas County to a high of 21 percent in Taney County in 2004. Clearly, seniors are an economic asset to their communities and the state.

Transportation

Transportation is important to obtain goods and services or visit friends and family. Whether seniors have the capacity to meet their transportation needs is often measured by how many hold a valid driver's license. Transportation needs are also likely to vary depending on the availability of mass transit. Whatever transportation arrangements seniors make, the lack of a driver's license indicates that transportation is an issue. The percent of Missouri seniors with a valid driver's license increased from 76.7 percent in 2001 to 79.6 percent in 2005. In counties with lower percentages of licensed senior drivers, transportation is likely to be a more pressing issue than in counties with higher percentages. In 2005 the percent of Missouri seniors with a valid driver's license ranged from a high of 92.0 percent in Taney County, to a low of 54.8 percent in St. Louis City.

Health Status

Selecting one health status measure for the senior population is particularly hard because of the wide range of health issues confronting seniors. The Missouri Department of Health and Senior Services maintains numerous health measures and Internet applications to help inform communities of

health status needs. These resources are referenced later in the report. This report utilizes the measure of "number of hospitalizations and ER visits for diabetes, averaged over three years per 10,000 seniors". This measure was selected because the number of cases by county is sufficient to produce a reliable rate, because diabetes is related to many other health problems, and because effective preventive measures can reduce the incidence of diabetes and related health problems. The rate of diabetes hospitalizations and ER visits per 10,000 seniors in Missouri increased from 68.3 in 2000, to 71.1 in 2003. In 2003 the rate ranged from a high of 239.3 in Reynolds County to 22.2 in Clark County.

Health Care Access

One measure of health care access for seniors is the number of primary care physicians per 1,000 seniors. Overall access improved in Missouri between 2000 and 2004, largely because the number of primary care physicians per 1,000 Missourians increased from the equivalent of 5.1 to 5.5 full-time physicians. In 2004 access to primary care physicians ranged from a low of under one-half of one full-time primary care physician per 1,000 seniors in Bollinger County to over 15 per 1,000 seniors in Boone County.

Long Term Care

Long-term care is a significant health care cost, especially for seniors and the state, due to Medicaid expenditures. It has also been an element of many health care reform initiatives. The number and value of long-term care insurance policies would be a useful measure for this indicator. However, this data is not reported by county. Consequently, this report presents Medicaid costs for in-home and institutionalized long-term care services per capita. This annual measure shows the trend in long-term care expense. It has increased from $122 per capita in 2002 to $147 per capita in 2005 – a 25% increase in three years in unadjusted dollars. However, because the measure is confounded between counties by differential rates of Medicaid eligibility and differential health care costs, this measure is not used in the construction of the overall county index of senior well-being.

Crime

At regional planning meetings for the report, participants consistently expressed a concern about crime and its relation to seniors. Accordingly, the number of property and violent crimes per 1,000 persons is reported as an outcome measure. Overall the Missouri crude crime rate declined from 48.8 in 2001 to 43.9 in 2005. In 2005 the crude crime rate ranged from a low of 1.6 crimes per 1,000 persons in Schuyler County to a high of 133.6 in St. Louis City.

Senior Participation

Social isolation was one of the most frequently mentioned issues at the regional meetings. The importance of social participation and engagement for seniors' quality of life was stressed repeatedly. Accordingly, this report creates a "Social and Civic Engagement Index for Seniors". The index combines standardized indices of voter registration, voter participation (civic engagement), and relative participation of seniors in Area Agencies on Aging (AAA) programs. While the index is a reliable measure for comparisons among counties, trend data incorporating updates from the AAAs will not be available until next year. In 2005, the overall senior participation index for Missouri was 42.5 percent, ranging from a high of 73.5 percent in Reynolds County to a low of 34.7 in Franklin County.

Status Indicators

Demographics

The proportion of seniors in Missouri's population has actually declined slightly in recent years, but will begin to expand rapidly as the decade ends. Overall, Missouri's population is approaching six million and in recent years has sustained slow but steady overall growth—a nearly three percent increase between 2000 and 2005. The state's senior population (65 and older) also increased slowly from 755,824 in 2000 to 784,467 in 2005—a 3.7 percent increase. The recent consistent growth of the senior population compared to the total population in Missouri reflects the smaller cohorts of people born during the Great Depression and World War II. Consequently, the percent of

the population 65 and older in Missouri remained stable at 13.5 percent. A similar pattern is occurring nationally. However, more and more baby boomers are turning 60 and soon will begin turning 65. The Missouri senior population is projected to reach nearly 15 percent of the total population by 2010, and to over 18 percent by 2020—proportions higher than the nation overall. An important characteristic of the senior population is the greater proportion of women than men. This gender difference is projected to moderate somewhat, but remain a persistent feature of the older population with implications for the types of services seniors need.

Quality of Life

Six measures of the overall quality of life among seniors are included as status indicators. The most recent source for these measures is the 2000 U.S. Census, although the introduction of the American Community Survey will provide annual estimates in the coming years.

Owner-Occupied Housing

Seniors' housing needs are more likely to be met if they live in owner-occupied housing. In 2000, Missouri had a higher percent of owner-occupied housing among seniors (79.1%) than the nation overall (77.6%). The rate ranged from 91 percent in Hickory County to 61 percent in St. Louis City.

Seniors Living in Families

Family life adds to the senior population's well-being. The Census defines families as two or more related persons living in the same household. Persons residing in single person households are not reported as "families." In 2000, 61.3 percent of Missouri seniors lived in family households compared with 64.0 percent nationally. By county, the percent of seniors living in family households ranged from a high of 73 percent in Stone County to fewer than 50 percent in the City of St. Louis.

Median Value of Owner-Occupied Housing

Home ownership is a significant asset for most seniors and the relative value of housing is a useful indicator of county assets. In 2000, the median value of owner-occupied housing in Missouri was $86,900 compared with $111,800 nationally. By county, the median value of housing ranged from a high of $127,800 in Platte County to a low of $34,300 in Worth County.

Seniors in Poverty

The proportion of seniors living in poverty is a direct measure of economic need. However, the Census infrequently measures senior poverty rates at the county level. In 2000 the overall poverty rate among seniors in Missouri was 9.9 percent compared with 10.9 percent nationally. In 2000 by county, the poverty rate among seniors ranged from a low of 5.1 percent in St. Charles County to a high of 23.2 percent in Pemiscot County.

Average Income of Senior Households

In 2000 the average income of households headed by seniors in Missouri was $37,822 compared with $41,712 nationally. In 2000 by county, average household income ranged from over $51,000 in St. Louis County to just under $21,600 in Putnam County.

Seniors with a College Education

A high proportion of seniors with a college education increases the capacity of communities to contribute to the quality of life of seniors. In 2000, 11.8 percent of Missouri seniors had a college education compared with 15.4 percent for the United States. The senior population with a college education in 2000 ranged from 27.9 percent in Boone County to 3.0 percent in Schuyler County.

Introduction

Health and Wellness

The health and wellness of Missouri seniors can be gauged in many ways. The report presents seven indicators related to long-term health and wellness. These indicators have been selected because preventative practices can be adopted to foster improved health. These wellness measures are from health survey data for which the best estimate available is a multi-county regional measure. Additional information and references about health indicators and health practices are available at the Missouri Department of Health and Senior Services' Web sites www.dhss.mo.gov/CommunityDataProfiles/ and www.dhss.mo.gov/Health/index.html.

No Exercise, 2005

In 2005 the percent of Missouri seniors reporting they participated in no exercise was slightly higher (34.7%) than the national rate among seniors (34.0%).

No Sigmoidoscopy or Colonoscopy, 2004

Nearly 40 percent of Missouri seniors (39.4%) report not having a screening test for colon cancer (sigmoidoscopy or colonoscopy) within the past 10 years; the national percent is 36.7.

High Blood Pressure, 2005

The Missouri and United States rates are the same (54.8%) for seniors who have been told by a health care professional that they have high blood pressure.

Obesity, 2005

Slightly more Missouri seniors (21.6%) have a body mass index indicating obesity than seniors nationally (21.0%).

Smoking, 2005

More Missouri seniors report currently smoking (9.2%) than seniors nationally (8.9%).

No Mammography, 2004

A greater percent of Missouri senior women (28.8%) have not have had a mammogram in the past year than senior women nationally (24.9%).

High Cholesterol, 2005

More Missouri seniors (55.3%) have been told by a health care professional that they have high cholesterol levels than seniors nationally (50.5%).

Conclusion

The report offers valuable information on the current status of Missouri's senior population and highlights areas of strength and opportunity. It is intended to increase awareness of the demographic issues that will impact Missouri in the next decade and beyond. Communities, policy leaders, individuals are encouraged to use this report as a tool to assess, plan and respond to the impact of the increasing population.

Disparities and Seniors

by: Kristofer Hagglund, Ph.D., Co-Director for Center for Health Policy, Associate Dean; Stan Hudson, Senior Policy Analyst; Grigol Kharabadze, Graduate Research Assistant, Center for Health Policy, University Missouri - Columbia

Population

Missouri seniors accounted for 13.3 percent of the state population in 2004, according to recent estimates from the University of Missouri Office of Social and Economic Data Analysis (OSEDA). The number of seniors is expected to increase, reaching 16.3 percent by 2010. By 2020, almost one-fifth of all Missourians (18%) will be 65 years or older.

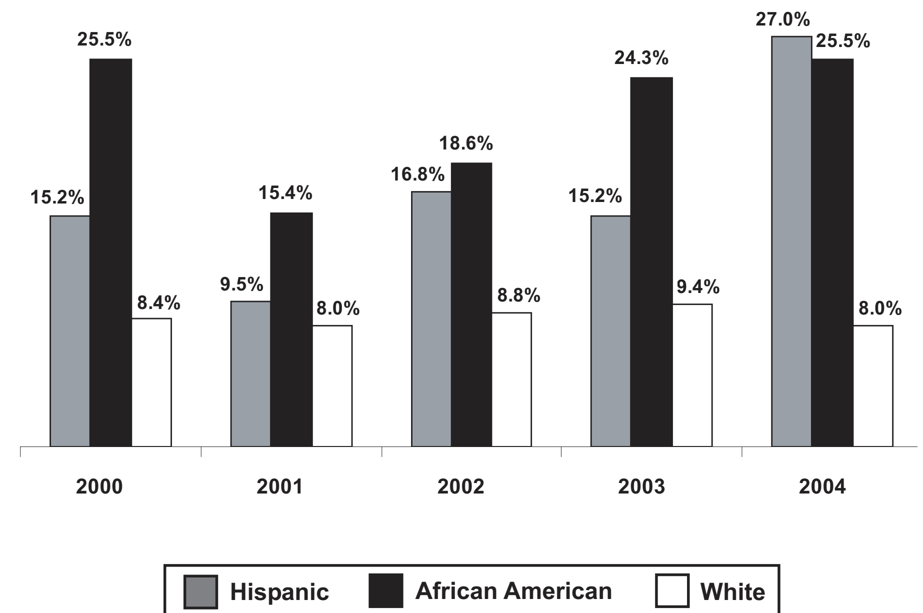
Based on census data, the racial composition of the senior population was relatively stable from 1990 to 2004. The changes that did occur were small, but consistent with trends observed in the total population. African Americans are underrepresented among seniors (about 11.8 percent of the total population, but only 7.3 percent of age 65 and older in 2004) because of their higher death rates at younger ages. The percentage of white seniors was approximately 92.7 percent in 1990 and steadily decreased to 91.7 percent in 2004. The Hispanic senior population has increased from 0.4 percent in 1990 to 0.8 percent in 2004. This trend is expected to accelerate as the percentage of Hispanics and seniors in Missouri continues to grow.

Socioeconomic Disparities

The data show significant racial and ethnic economic disparities among Missouri seniors. As seen in Figure 1, African American and Hispanic seniors were two to three times more likely to be living in poverty than white seniors. Moreover, the percentage of Hispanic and African American seniors in poverty appears to have increased since 2001 while the percentage for whites has remained relatively stable.[1] By 2004, over one-fourth of Hispanics and African Americans age 65 and older were living in poverty.

Seniors in poverty are less likely to receive needed health care and more likely to miss medications because they cannot afford them. Without adequate health care, seniors often experience serious complications because undiagnosed and untreated conditions worsen, further reinforcing existing health disparities. Elderly individuals in poverty experience greater disability,[2] faster decline in mental capabilities,[3] and more limitations in the performance of daily life activities.[4]

Figure 1. Percent of Missourians Age 65 and Older Below Poverty by Race and Ethnicity, 2000-2004



Disparities and Seniors

Health Disparities

Death rates are a fundamental measure of racial disparity in health status. From 2000 to 2004 the overall death rate for African American Missourians ages 65-74 was nearly 40 percent higher than for whites, and it was 20 percent higher for ages 75-84. It is only at age 85 and older that death rates were nearly equal.[5] The differences were not evenly distributed across the causes of death. Indeed, there are some causes for which the white death rate is higher. Figure 2 presents death rates for the seven leading causes of death for Missouri seniors from 2000 through 2004. The rates shown here tend to underestimate the disparity because they are based on aggregated rates for all seniors age 65 and older. African American seniors are more likely to be in the younger end of the age range.

African American seniors were nearly twice as likely to die from diabetes, 20 percent more likely to die from cancer and six percent more likely to die from heart disease than white seniors.[6] Conversely, white seniors were more likely to die from respiratory disease and Alzheimer's disease than African Americans.

Figure 3 presents the disparities ratio between African American and white seniors for types of cardiovascular diseases. Although the two groups experienced similar rates of heart disease, African American Missourians 65 and older were over 50 percent more likely to die from atherosclerosis and 140 percent more likely to die from hypertension.[7]

Figure 2. Leading Causes of Death by Race: Missourians Age 65 and Older, 2000-2004

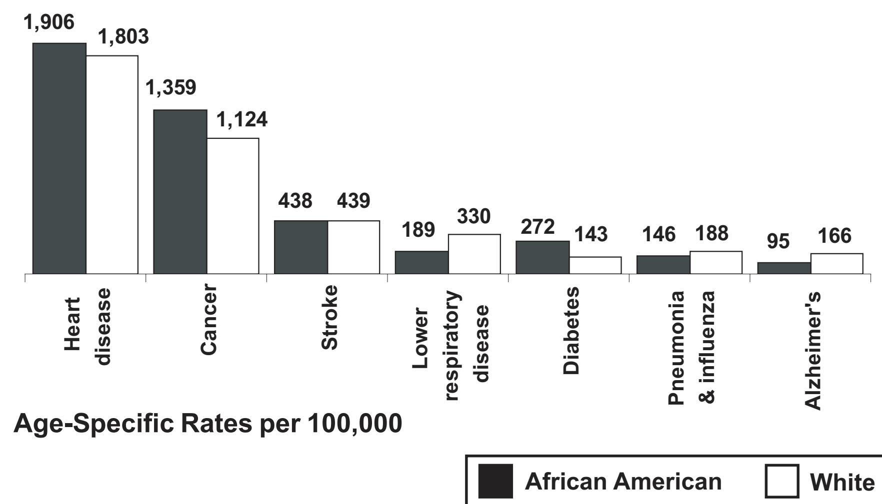
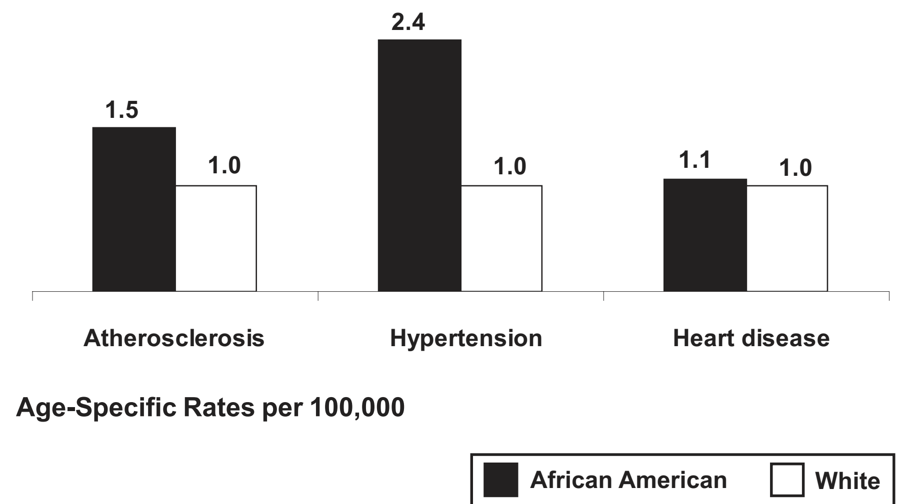


Figure 3. Disparity Ratios for Cardiovascular Disease - Related Deaths by Race: Missourians Age 65 and Older, 2000-2004



Disparities and Seniors

Figure 4 presents death rates by race for the five leading cancer causes of death for Missourians 65 and older. For each cancer, the death rate is higher for African American seniors than for their white counterparts.[8] The highest disparity was found for prostate cancer. African American men were over ninety percent more likely to die than white men.

The death rate for Hispanic seniors in Missouri is significantly lower than for their non-Hispanic counterparts. This is true for heart disease, cancer, stroke, respiratory diseases, and Alzheimer's disease, as well as for the total death rate (see Figure 5).[9] These favorable ratios could partially reflect bias in the data. Hispanic death rates in the United States can be understated due to greater likelihood of Hispanic ethnicity being reported on the Census than on death certificates.[10] Also, like African American seniors, Hispanic seniors are more likely to be at the younger end of the 65-and-over age span than their non-Hispanic counterparts which may partially explain the improved rates.

Figure 4. Top Five Death Rates for Cancer by Race: Missourians Age 65 and Older, 2000-2004

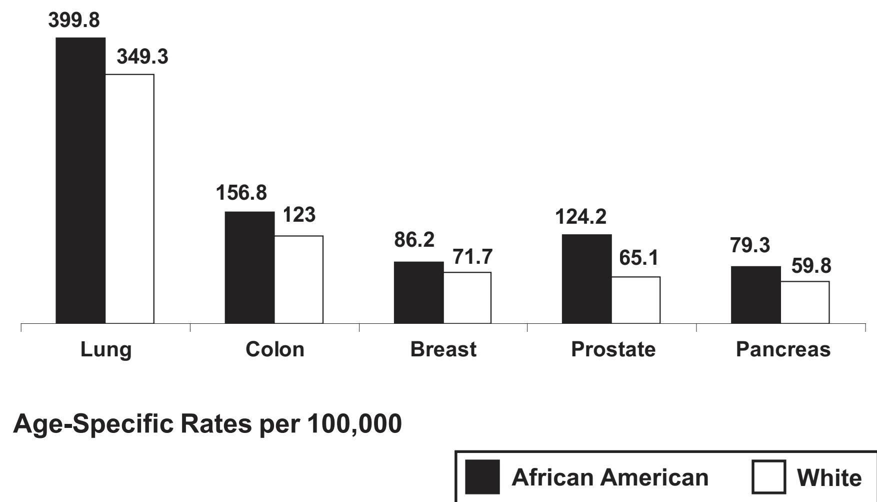
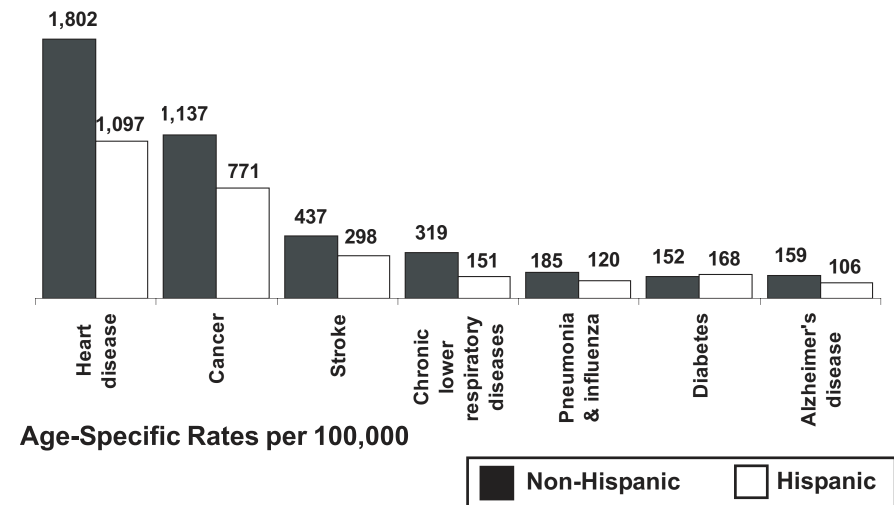


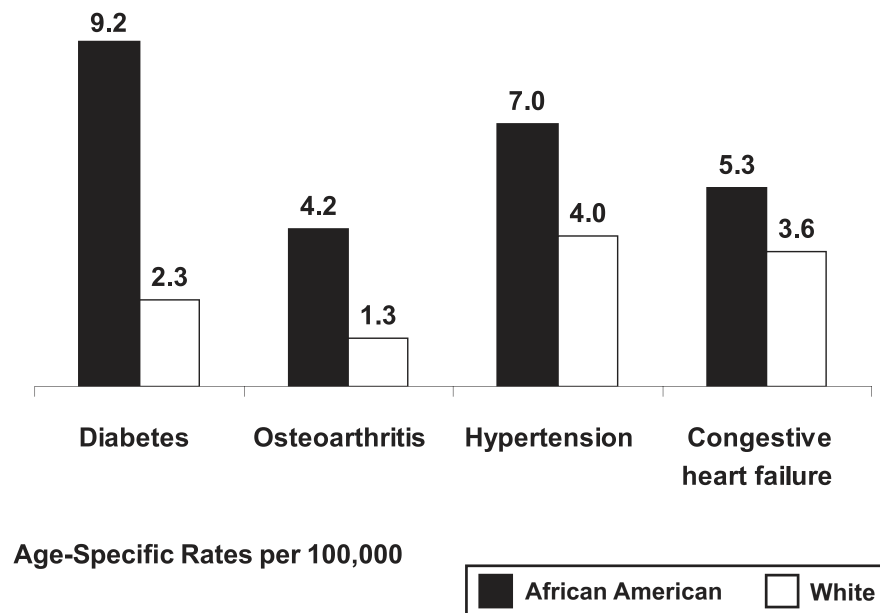
Figure 5. Select Death Rates by Ethnicity: Missourians Age 65 and Older, 2000-2004



Disparities and Seniors

There were many racial disparities found in emergency room (ER) usage for certain conditions. African American seniors in Missouri were four times more likely to be treated for diabetes, over three times more likely to be treated for osteoarthritis, and about one-and-a-half times more likely to be seen for hypertension and congestive heart failure in the ER than white seniors[11] (see Figure 6). Many factors could explain the racial disparities in ER usage, including a lack of access to primary care and prevention services. Early access to care can increase early detection and improves management for these conditions reducing ER utilization. See Figure 6.

Figure 6. Select Emergency Room Utilization Rates by Race: Missourians Age 65 and Older, 2000-2004



Data Limitations

The estimated Hispanic population age 65 and older in many Missouri counties has been and remains relatively small. Although some data suggest disparities, due to the variability of small numbers they do not allow for a truly accurate picture to be drawn. As this population continues to grow and additional years of data are collected, data may soon be able to be aggregated across years to provide statistical analysis of potential differences.

Similarly, data are reported by Hispanic versus non-Hispanic populations. No information is reported by ethnic subgroups such as Mexican, Puerto Rican or Cuban because of population limitations and rules of confidentiality. As the minority population age 65 and older in Missouri grows, we may soon be able to achieve sufficient numbers to explore more accurately the similarities and differences among ethnic and racial subgroups. Since these subgroups are often very culturally and politically diverse, a better understanding would allow for the design of more targeted and effective interventions.

Implications

Racial and socioeconomic health disparities have substantial implications for Missouri communities and their senior population. Healthy seniors contribute to the community in their daily activities. In addition to buying products and services, many seniors hold part-time jobs and volunteer valuable time to community organizations. The implications of a debilitating illness or condition for individual seniors and their families are significant. Quality of life is greatly reduced, limiting social and economic opportunities. Limitations in performance of daily activities reduce independence and elicit psychological distress, which further contribute to physical and mental deterioration.

Communities of color tend to have less political capital and fewer economic resources, thereby further perpetuating racial and ethnic health disparities. Resources need to be made available to allow minority and other communities to identify problems contributing to local disparities and design effective interventions to achieve health equity. At the same time, local communities

are encouraged to take a closer look at their social and health service networks to assure that adequate services, such as housing, food, transportation, and health care, are available to all community members. Outreach and education campaigns designed to inform Missouri seniors about state and community services need to include culturally appropriate images and messages that appeal to the growing diversity of Missouri's senior population.

Challenges

Research examining racial, ethnic, and socioeconomic health disparities in Missouri is limited. A comprehensive literature search revealed 129 published studies that have examined some aspect of racial and ethnic disparities in at least some region of Missouri. However, none has focused specifically on disparities among the senior population. One study did recommend that health programs to eliminate disparities need to focus on seniors,[12] however, this study was largely focused on economic disparities and did not examine the role race and ethnicity play in the health of seniors.

More comprehensive research is needed. Specifically, research focusing on the identification of the underlying causes and testing potential interventions to eliminate these disparities among Missouri's seniors is crucial. The demand for this type of research will grow as both the minority population and the senior population of Missouri are projected to increase dramatically in coming decades.

Best Practices

Missouri seniors would benefit from a program to educate providers in delivering culturally competent health services to racial and ethnic minorities.[13] One approach to reducing disparities is intensified recruiting efforts of a diverse health care workforce reflective of the state's racial and ethnic composition.[14] Disparities can also be reduced by understanding and improving health literacy among seniors.[15] Finally, health outreach programs for minority populations, such as training African American hair salon professionals to talk to their clients about senior health issues,[16] have proved successful in other communities. None of these recommended programs represents a single solution to eliminating health disparities, but in combination, these programs can help Missouri move closer to achieving health equity for all seniors.

Mental Health and Seniors

by: Meredith Eisenhart, Jaime Goldberg, Nancy Morrow-Howell, Michael Nickel, with the Research Network Development Core of the Center for Mental Health Services Research, George Warren Brown School of Social Work, Washington University in St. Louis.

Mental illness and its consequences are major concerns in Missouri because of their impact on individuals and communities. Mental disorders are recognized as having adverse effects on quality of life,[1] increasing overall levels of disability,[2] and are among the most expensive medical conditions.[3] Depression is one of the most common and debilitating mental illnesses; yet it is under- or misdiagnosed and often goes untreated in older adults, having a huge impact on individuals, families, and society. In fact, the direct and indirect costs of depression on society have been estimated at $77 billion, of which 31 percent is direct treatment cost and 52 percent is indirect cost related to lost productivity and excess absenteeism at work.[4] Additionally, informal care of older adults with depression is estimated at $9 billion.[5]

Background

Clinically significant depression is defined by three subcategories: (1) major depressive disorder, (2) dysthymia, and (3) subthreshold depression. The hallmark symptoms of depression are low mood, feelings of worthlessness, difficulty concentrating, and changes in sleep and appetite,[6] with many older adults presenting physical symptoms.[7] In a recent study examining community long-term care in Missouri, it was found that 6 percent of older adults have major depression and 19 percent have subthreshold depression, of which 40% were persistently depressed over one year.[8] Older adults in long-term care facilities have drastically higher depression rates with 35 percent experiencing clinically significant depression and 12 percent major depressive disorder. Clinically significant depression in older adults results in greater risk of suicide, [9] poorer outcomes on medical conditions, such as diabetes and heart disease,[10] as well as an overall shortened lifespan[11] and increased mortality rates.[12]

Treatment

Studies and expert recommendations suggest that drug therapy and counseling are effective with this population.[13] The use of antidepressants poses unique challenges given that older adults often take more medications and have comorbid medical conditions, causing increased risk of drug-drug[14] and drug-disease interactions.[15] Physical changes in older adults (e.g., decreased liver function) can alter drug efficacy by affecting how a drug is utilized by the body.[14] Treatment compliance is an issue for older adults taking antidepressants, especially for those with physical or cognitive impairments.[14] Side effects of antidepressants, such as nausea, loss of appetite, and sexual dysfunction, also influence compliance. Even with these complications, more than half of older adults treated with antidepressants experience at least a 50 percent reduction in depressive symptoms.[16]

Several models of effective individual and group therapies are recommended for depressed older adults,[17] with Behavioral Therapy (BT) and Cognitive Behavioral Therapy (CBT) receiving the most research attention.[18] The efficacy of BT and CBT suggests that they are viable options for treating older adults with depression.[20] Other therapies that have been recommended for late-life depression include problem-solving, interpersonal, reminiscence/life review, and brief psychodynamic interventions.[20] In a review of treatment options, it was concluded that there is not yet adequate research evidence to prove which approach is best.[19] Experts do agree that treating older adults with a combination of antidepressants and counseling can minimize relapse and decrease disability. [13] [20] Electroconvulsive Therapy (ECT) is used as a last resort to treat older adults with depression when combinations of antidepressants and psychotherapies have failed.

Since many older adults avoid drug therapy or counseling, a shift to incorporating treatment for depression into non-mental health settings has emerged. Disease management programs, based on the model used with physical ailments like heart disease and diabetes, provide screening and standardized follow-up through a team approach, and support patient decision-making and self-management.[20] Literature reviews support the effectiveness of disease management programs for adults[20], and more recently, older adults.[21]

Mental Health and Seniors

Barriers

Studies found that 75 percent of depressed older adults in the community and 80 percent of nursing home residents do not receive appropriate mental health treatment[22] [23] due, in part, to the barriers older adults encounter in seeking care. Medicare covers only 50 percent of the cost of mental health care compared to 80 percent for other services,[24] forcing Medicare enrollees to pay high out-of-pocket costs or forego treatment. Stigma also prevents people from seeking needed mental health services, particularly in underserved and rural communities.[25] Older adults with a history of being underserved and discriminated against are more likely to distrust the healthcare system and seek mental health services in less formal settings, such as religious organizations.[26] Lack of transportation also decreases access to treatment, particularly in rural areas.[27] Additionally, the complexity of the mental health care system can feel like a "maze" and navigating it results in less service usage.[28]

Professionals also face barriers in providing mental health treatment. While primary care physicians encounter depressed older adults, only 55 percent feel comfortable with diagnosing depression and 35 percent with prescribing anti-depressant medication.[29] Depression often coincides with medical illnesses that are given priority over mental health issues. In the course of treatment, depression is often mistaken as normal aging or simply physical complaints.[30] Specialists trained in issues and diseases specific to older adults, such as geriatricians and geropsychiatrists, are in short supply.[7] There are only 124 certified geriatricians in Missouri, or 3.4 for every 10,000 adults over the age of 75. This compares to the national average of 4.2 per 10,000.[31] The statistics are similarly bleak for geropsyschiatrists of which there are 46 in Missouri, or 1.3 for every 10,000 Missourians over age 75.[32] Medical professionals are not attracted to this field because their earning potential is proportionately less than most doctors due to the Medicare reimbursement structure.[33] [34] Rural areas of Missouri particularly lack mental health care providers with 94 of the 114 counties in Missouri cited as Mental Health Professional Shortage Areas.[26]

Future Directions

In 2006, the National Association on Mental Illness gave Missouri an overall grade of C- in mental health care for its citizens. Missouri spends only $67.30 per capita for mental health and ranks 31st in the nation.[35] Older adults in Missouri have the right to receive optimal, affordable, evidence-based mental health care. The following are options to explore to transform mental health care in Missouri:

- Continue to work toward goals of the President's New Freedom Commission on Mental Health.[28]
- Work toward goal of 2005 White House Conference on Aging: "improve recognition, assessment, and treatment of mental illness and depression among older adults."[28]
- Remove existing regulatory barriers and change reimbursement policies of Medicare and Medicaid to encourage better collaboration and mental health parity.[36]
- Fund research to improve understanding of treatment efficacy and access to care.
- Monitor the effects Medicare Part D has on cost and access to psychotropic medications.
- Invest in Missouri-specific data on mental illness in older adults.

The growing number of older Americans will only magnify the existing problems with access to care for those facing late-life depression. While treatment is effective, disability, decreased quality of life, demands on caregivers, and differential reimbursement policies persist. Partnerships among researchers, clinicians, governmental agencies, third party payers, patients, and families are essential to overcome these barriers.

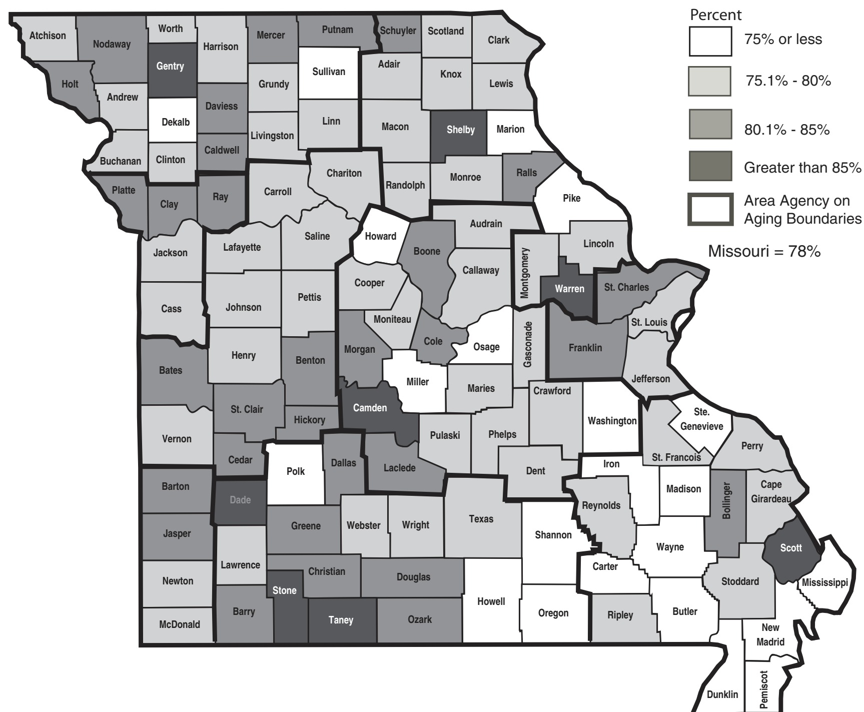
Transportation and Seniors

by: Amy Lake, Community Policy Analysis Center, University of Missouri - Columbia; Steven Bilings, Multimodal Operations - Transit Section, Missouri Department of Transportation; Tracy Greever-Rice, Office of Social & Economic Data Analysis, University of Missouri - Columbia

As the senior population in Missouri grows, transportation is emerging as an important health, safety and quality of life policy issue. Currently, 586,000 (87%) of Missouri seniors hold valid drivers licenses. This leaves approximately 1 in 10 seniors dependent on friends, family and public transportation to make vital trips to the grocery store, to medical appointments, or to visit friends and family. Of Missouri seniors who hold drivers licenses, 67 percent live in urban counties, and 33 percent live in rural areas. [1]

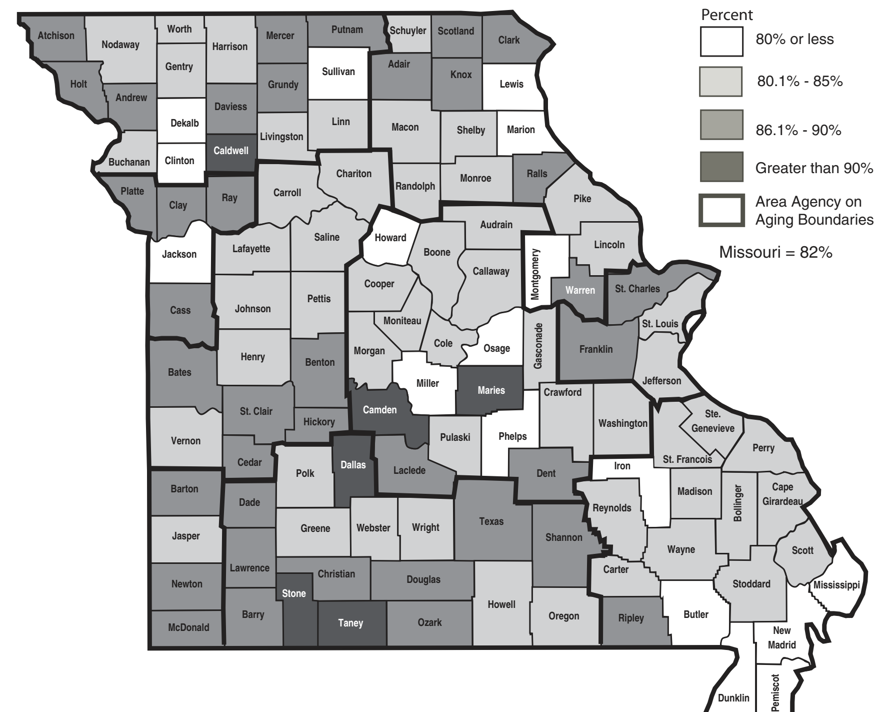
As seniors age from their 60s into their 70s and 80s, the proportion maintaining licenses decreases. Eighty-seven percent of young seniors (65-74) have valid drivers licenses compared to seniors aged 75-84 (77%) or 85 and older (43%). Of those who remain licensed, it is difficult to know exactly how many actively drive compared to those who maintain a license as a convenient form of identification. Anecdotally, we know that not all senior citizens with driver's licenses have personal automobiles, and we know that in some cases, seniors choose not to drive due to a variety of reasons including physical abilities, road conditions, traffic and weather.

Proportion of Persons 65 and Older with a Driver's License, 2001



Source: Missouri Department of Revenue; 4/06

Proportion of Persons 65 and Older with a Driver's License, 2005



Source: Missouri Department of Revenue; 4/06

Transportation and Seniors

Transportation Options for Missouri Seniors

Missouri maintains a network of public transportation resources for seniors, the most vital located in the larger metropolitan areas. St. Louis City and County have a comprehensive public transit system, which offers special services to meet seniors' needs as does Kansas City and its surrounding communities. Several smaller cities (Columbia, Jefferson City, Springfield, Joplin and St. Joseph) and rural municipalities (Bloomfield, Cape Girardeau, Carthage, Chillicothe, Clinton, El Dorado Springs, Excelsior Springs, Houston, Lamar, Marshall, Marshfield, Mt. Vernon, Nevada, New Madrid and West Plains) also provide transportation for seniors and people with disabilities.[2]

Rural regions of Missouri rely most heavily on three statewide transportation programs: Older Adults Transportation Service (OATS), Southeast Missouri Transportation Service (SMTS) and Missouri Elderly and Handicapped Transportation Assistance Program (MEHTAP). OATS, which specializes in services to seniors and the disabled, serves 87 Missouri counties and offers door-to-door transportation to the general public. SMTS serves the southeast part of the state in areas without OATS services. MEHTAP is a statewide program, which funds approximately 200 non-profit transportation providers. These providers also specialize in transportation services for seniors and people with disabilities. Single county, MEHTAP-supported transit systems serve seniors in the Bootheel counties as well as Ray and Callaway counties. Thus, all counties in Missouri have some public transportation.[3]

Seniors and Those Who Serve Seniors Voice Their Concerns

In 2005, the Area Agencies on Aging, Department of Health and Senior Services and the University of Missouri Office of Social and Economic Data Analysis hosted 47 town hall meetings across the state attended by approximately 500 participants. In these meetings, participants were asked to discuss important issues for Missouri's senior population. Transportation emerged as one of the most pressing concerns for Missouri's seniors. Participants described transportation challenges more than 400 times during these meetings. While participants generally praised the quality and reiterated the necessity of maintaining existing services, they also suggested the need for additional services to support seniors, particularly in rural areas, in their vital daily activities. Participants emphasized that seniors who are socially engaged and capable of meeting their daily needs are healthier and more independent than seniors who are isolated or who cannot meet these needs. Participants recognized that transportation, whether public or private, is key to keeping seniors socially engaged, yet transportation policy and services are not always designed with due consideration of seniors.

Senior Transportation Research

Missourians' concerns, as expressed in the town hall meetings, are reflected in national research on the topic of transportation for seniors. Results from the 2001 National Household Transportation Survey show that almost 90 percent of all trips by seniors in the United States are made in vehicles compared to only 1.3 percent on fixed-route transit services. (This would not include OATS, SMTS, and MEHTAP, which provide personalized door-to-door services on request.) The same study suggests the fixed-route transit services are less appropriate for the senior population than working adults and school-aged youth because seniors tend to travel during off-peak commuter times when fixed-route transit tends to have fewer services. Fixed-route transit systems may not be accessible for seniors for several reasons. Bus stops, for instance, may not provide adequate protection from the elements, and seniors are more vulnerable to illness by excessive cold or heat. Information about routes and travel times may not be clear or formatted in a matter is easily understandable to seniors. Signage may not be clear or may not have writing large enough for use by visually-impaired seniors, and buses may not be equipped with seating and mounting and dismounting features that are designed for seniors with limited mobility.[4]

Public safety is one of the greatest concerns for seniors who drive. A study by the National Highway Traffic Safety Administration shows that seniors aged 70 and older accounted for 13 percent of traffic fatalities in 2000 and 17 percent of pedestrian fatalities, but only accounted for 9 percent of the overall US population. This same study shows that the driver fatality rate for people 85 years of age and older is nine times higher than the rate for drivers

Transportation and Seniors

between the ages of 25 and 69 when calculated in terms of the estimated annual travel.[5]

Statewide accident statistics show that 13,824 senior drivers were involved in traffic accidents on Missouri roads in 2004. This accounts for 8.5 percent of all traffic accidents that occurred that year. Ten percent or 124 of all fatal traffic accidents involved drivers over 65 years of age. It is worth noting that 77 percent of all fatal traffic accidents in Missouri occurred in rural areas in 2004. This is particularly significant for the senior population, which has fewer public transportation options in rural areas.[6]

Innovative Ideas and Programs

The Missouri Department of Transportation (MoDOT) has been active in addressing issues for senior drivers. Some very simple actions can have significant and positive impact on safe driving such as painting wider highway lines, advance intersection warning signs and wrong-way markings on freeway ramps. Additionally, the Highway Safety Division of MoDOT focuses on improving roadway safety by changing driver behavior. Highway Safety is in the process of developing an older driver campaign that will include fact sheets, posters, billboards, and public service announcements targeting the older driver. The campaign will feature driving tips to keep seniors safely mobile.

The Missouri health care system is another source of innovation. For example, the Northeast Missouri Rural Health Network has initiated a program called CareLink. CareLink provides free transportation in an eleven county service area to residents of all ages for medical and social service appointments. Some rural health care facilities provide transportation or vouchers to pay for their senior patient's public transportation .

As the population continues to age in Missouri and nationwide, transportation will remain a high priority issue in terms of health, safety and quality of life.

References

Disparities and Seniors

[1] U.S. Department of Commerce, Bureau of the Census. American Community Survey and Supplemental Survey Datasets, 2000, 2001, 2002, 2003, 2004. Washington, D.C. Accessed through American FactFinder http://factfinder.census.gov last accessed 05/05/2006.

[2] Melzer, D., et al. (2001). Educational differences in the prevalence of mobility disability in old age: the dynamics of incidence, mortality, and recovery. *Journals of Gerontology. Series B, Psychological Science & Social Sciences*, 56, S294-S301.

[3] Farmer, M.E., et al. (1995). Education and change in cognitive function. The epidemiologic catchment area study. *Annals of Epidemiology*, 5, 1-7.

[4] Kington, R.S., & Smith, J. P. (1997). Socioeconomic status and racial and ethnic differences in functional status associated with chronic diseases. *American Journal of Public Health*, 87, 805-810.

[5] Missouri Department of Health and Senior Services, Missouri Information for Community Assessment, Deaths, http://www.dhss.mo.gov/DeathMICA/indexcounty.html, Last accessed 04/04/06.

[6] Ibid

[7] Missouri Department of Health and Senior Services, Missouri Information for Community Assessment, Deaths, Heart Disease, http://www.dhss.mo.gov/DeathMICA/indexcounty.html, Last accessed 04/04/06.

[8] Missouri Department of Health and Senior Services, Missouri Information for Community Assessment, Deaths, Cancer, http://www.dhss.mo.gov/DeathMICA/indexcounty.html, Last accessed 04/04/06.

[9] Rosenberg, H.M., Maurer J.D., Sorlie, P.D., Johnson N.J., et al. (1999). Quality of death rates by race and Hispanic origin: a summary of current research, 1999. National Center for Health Statistics. Vital Health Stat, 2, (128).

[10] Missouri Department of Health and Senior Services, Missouri Information for Community Assessment, Deaths, http://www.dhss.mo.gov/DeathMICA/indexcounty.html, Last accessed 04/04/06.

[11] Missouri Department of Health and Senior Services, Missouri Information for Community Assessment, Emergency Room Statistics for the State of Missouri, http://www.dhss.mo.gov/EmergencyRoomMICA/indexcounty.html, Last accessed 04/05/06.

[12] Ryan, M.J. (1988). Programs for the indigent: filling the cracks in healthcare. *Health Progress*, 69 (5), 45-47.

[13] Smedley, B.D., Stith, A.Y., & Nelson, A.R. (Eds.) (2003). *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. Washington, D.C.: The National Academies Press.

[14] Sullivan Commission (2004, September 20). *Missing persons: minorities in the health professions. A report of the Sullivan commission on diversity in the healthcare workforce*. Available at http://www.amsa.org/advocacy/Sullivan_Commission.pdf .

[15] *Proceedings of the 2005 White House Conference on Aging Mini-Conference on Health Literacy and Health Disparities*, American Medical Association, 2005.

[16] Eugenia Eng. (2005-2006) The BEAUTY Health Project. North Carolina Community Health Scholars Program. University of North Carolina.

Mental Health and Seniors

[1] Spitzer R. L., Kroenke, K., Linzer, M., Hahn, S. R., Williams, J. B. W., deGruy, F. V., III, Brody, D., & Davies, M. (1995). Health-related quality of life in primary care patients with mental disorders. Results from the PRIME-MD 1000 study. *JAMA, the Journal of the American Medical Association,* 274, 1511-1517.

[2] Murray, C.J.L, & Lopez, A.D. (Eds.) (1996). *The global burden of disease and injury series: Vol. 1. A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*. Cambridge, MA: Harvard University Press.

[3] Thorpe, K.E., Florence, C.S., & Joski, P. (2004, August 25). Which medical conditions account for the rise in health care spending? *Health Affairs*. http://content.healthaffairs.org/cgi/reprint/hlthaff.w4.437v1

[4] Greenberg, P., Kessler, R., Birnbaum, H., Leong, S., Lowe, S., Berglund, P. & Corey-Lisle, P. (2003). Economic burden of depression in the United States: how did it change between 1990 and 2000. *Journal of Clinical Psychiatry, 64,* 1465-1475.

References

[5] Langa, K.M., Valenstein, M.A., Fendrick, A.M., Kabeto, M.U., & Vijan, S. (2004). Extent and cost of informal caregiving for older Americans with symptoms of depression. *American Journal of Psychiatry, 161,* 857-863.

[6] American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, D.C.

[7] U.S. Department of Health and Human Services. (2001). Mental health: a report of the surgeon general. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

[8] Morrow-Howell, N., Proctor, E., Choi, S., Lawrence, L., Brooks, A., Hasche, L., Dore, P., & Blinne, W. (In press). Depression in community long-term care: implications for intervention development. *American Journal of Geriatric Psychiatry.*

[9] Pearson, J.L., & Conwell, Y. (1995). Suicide in late-life: challenges and opportunities for research. *International Psychogeriatrics, 7*, 131-136.

[10] Katon, W. (1996). The impact of major depression on chronic medical illness. *General Hospital Psychiatry, 18*, 215-219.

[11] Penninx, B. W., Beekman, A. T., Honig, A., Deeg, D. J., Schoevers, R. A., van Eijk, J. T., et al. (2001). Depression and cardiac mortality: results from a community-based longitudinal study. *Archives of General Psychiatry, 58*, 221-227.

[12] Unützer, J., Patrick, D.L. , Marmon, T. , Simon, G.E., & Katon, W.J. (2002). Depressive symptoms and mortality in a prospective study of 2,558 older adults. *American Association for Geriatric Psychiatry, 10*, 521-530.

[13] Shanmugham, B., Karp, J., Drayer, R., Reynolds, C.F., & Alexopoulos, G. (2005). Evidence-based pharmacologic interventions for geriatric depression. *Psychiatric Clinics of North America, 28*, 821-835.

[14] American Medical Association (2002). Featured report: improving the quality of geriatric pharmacotherapy (A-02). From http://www.ama-assn.org/ama/pub/category/print/13592.html

[15] McLeod, P.J., Huang, A.R., Tanblyn, R.M., & Gayton, D.C. (1997). Defining inappropriate practices in prescribing for elderly people: a national consensus panel. *Canadian Medical Association Journal, 156* (3), 385-391.

[16] Steffans, D.C., Krishnan, K.R., & Helms, M.J. (1997). Are SSRIs better than TCAs? comparison of SSRIs and TCAs: a meta-analysis. *Depression Anxiety, 6* (1), 10-18.

[17] Scogin, F., Welsh, D., Hanson, A., Stump, J. , & Coates, A. (2005). Evidence-based psychotherapies for depression in older adults. *Clinical Psychology: Science and Practice, 12*, 222-237.

[18] Mackin, R.S., & Areán, P.A. (2005). Evidence-based psychotherapeutic interventions for geriatric depression. *Psychiatric Clinics of North America, 28*, 805-820.

[19] Areán, P.A., & Ayalon, L. (2005) Assessment and treatment of depressed older adults in primary care. *Clinical Psychology: Science and Practice, 12*(3), 321-335.

[20] Badamgarav, E., Weingarten, S., Henning, J.M., Knight, K., Hasselblad, V., Gano, A., & Ofman, J. (2003). Effectiveness of disease management programs in depression: a systematic review. *American Journal of Psychiatry, 160,* 2080-2090.

[21] *Neumeyer-Gromen, A., Lampert, T., Stark, K., & Kallischnigg, G. (2004).* Disease management programs for depression: a systematic review and meta-analysis of randomized controlled trials. *Medical Care, 42(12), 1211-1221.*

[22] Mental health care and older adults: facts and policy recommendations. (n.d.). From http:// www.apa.org/ppo/issues/oldermhfact03.htm

[23] Rabins, P.V. (1996). Barriers to diagnosis and treatment of depression in elderly patients. *American Journal of Geriatric Psychiatry, 4* (4), S79-S83.

[24] Medicare mental health coverage. (2003). Center for Medicare Education. Retrieved March 10, 2006, from http://www.futureofaging.org/PublicationFiles/V4N3.pdf

[25] Eliminate stigma and discrimination. (n.d.). Missouri Rural Health Association. Retrieved March 4, 2006, from http://www.morha.org/rmhm.php

[26] Mental health services in Missouri. (n.d.). Missouri Rural Health Association. Retrieved March 4, 2006, from http://www.morha.org/rmhm.php

[27] Home and community-based services for older adults: transportation. (n.d.). National Association of Area Agencies on Aging. Retrieved March 11, 2006, from http://www.n4a.org/transportation_0207.pdf

[28] President's New Freedom Commission on Mental Health. (2003). Achieving the promise: transforming mental health in America final report. (DHHS Publication No. SMA-03-3832). Rockville, MD: Author.

References

[29] Callahan, C. M., Nienaber, N. A., Hendrie, H. C., & Tierney, W. M. (1992). Depression of elderly outpatients: primary care physicians' attitudes and practice patterns. *Journal of General Internal Medicine, 7*, 26–31.
[30] Mental health care and older adults: facts and policy recommendations. (n.d.). American Psychological Association. From http://www.apa.org/ppo/issues/oldermhfact03.html
[31] Distribution of Certified Geriatricians in the United States. (2003). Longitudinal study of training and practice in geriatric medicine. From http://www.adgapstudy.uc.edu/PDF/Tables/Section_1/Figure_1_1.pdf
[32] Distribution of Certified Geriatric Psychiatrists in the United States. (2003). Longitudinal study of training and practice in geriatric medicine. From http://www.adgapstudy.uc.edu/PDF/Tables/Section_1/Figure_1_2.pdf
[33] Bragg, E. & Warshaw, G. (2004). Financial compensation for geriatricians in academic and private practice. *Training & Practice Update, 2*, 1-7. From http://www.adgapstudy.uc.edu/pdf/October2004.pdf
[34] Distribution of Certified Geriatric Psychiatrists in the United States. (2003). Longitudinal study of training and practice in geriatric medicine. From http://www.adgapstudy.uc.edu/PDF/Tables/Section_1/Figure_1_2.pdf
[35] National Association on Mental Illness Grading the States 2006: A Report on America's Health Care System for Serious Mental Illness.
[36] Unützer, J., Schoenbaum, M., Druss, B.G., & Katon, W.J. (2006). Transforming mental health care at the interface with general medicine: report for the president's commission. *Psychiatric Services, 57* (1), 37-47.

Transportation and Seniors

[1] Federal Office of Rural Health Policy for metro and non-metro county definitions and DP-1. Profile of General Demographic Characteristics: 2000 US Census.
[2] HDR, *MoDOT Statewide Passenger Transportation Study: Transportation Issues Related to the Elderly and People with Disabilities Including Non-Emergency Medical Services*.
[3] Ibid
[4] Ibid
[5] US Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2000: Older Population*, DOT HS 808328.
[6] MoDOT 2004 Missouri State Highway System, *Traffic Accident Statistics.*

Indicator Development

Potter, D.E.B., Vistness, J. (2003). Health Insurance for the Elderly-Issues in Measurement Workshop. Meeting summary, commissioned papers and discussants' remarks. The Federal Interagency Forum on Aging Related Statistics and the Agency for Healthcare Research and Quality, Paper No. 06003.

Kassner, E. (2006). Long-Term Care Insurance Partnership Programs. AARP Public Policy Institute. Washington, D.C. http://www.aarp.org/ppi

Johnson, R.W., Uccello, C.E. (2005). Is Private Long-Term Care Insurance the Answer? Center for Retirement Research at Boston College, Number 29.

Fisher, R., Turner, J. (2003). Health Insurance Estimates for Counties. U.S. Census Bureau. Washington, D.C.

Fisher, R., Turner, J. (2004). Small Area Estimation of Health Insurance Coverage From the Current Population Survey's Annual Social and Economic Supplement and the Survey of Income and Program Participation. U.S. Census Bureau. Washington, D.C.

Finkelstein, A., McGarry, K. (2003). Private Information and Its Effect on Market Equilibrium: New Evidence from Long-Term Care Insurance. Harvard University and NBER: Finkelstein. University of California, Los Angeles and NBER: McGarry.

Juster, F. Thomas, Lupton, Joseph P., Cao, Honggao. (2002). Ensuring Time-Series Consistency in Estimates of Income and Wealth. University of Michigan Retirement Research Center, Issues in Brief, Project #: UM 02-Q3.

Nelson, Brittne, Binette, Joanna. (2006). 2005 Missouri Member Survey on Long-Term Care, Assisted Living, and Medicaid. Knowledge Management. Washington D.C.

Lewis, Stephanie, Wilkin, John, Merlis, Mark, (2003). Regulation of Long-Term Private Care Insurance: Implementation Experience and Key Issues. Henry J. Kaiser Family Foundation.

How to Use Your Missouri Senior Report

What is an outcome indicator?

An outcome indicator represents an issue important to the overall well-being of seniors in your community.

What is an outcome measure?

An outcome measure is the specific item that indicates how well seniors are doing in regard to an issue. Measures were selected based upon the availability over time and the reliability of the data.

What is a status indicator?

The status indicators describe the characteristics of the senior population in a county at a single point in time. The status indicators provide context for understanding and prioritizing the outcome indicators.

What is an index?

An index is a tool that combines more than one measure into a single value by converting different units of measurement into a standard unit of measure. An index is used to describe an indicator when single measures are unavailable.

How do I interpret the county rank for an outcome indicator?

The county rank for an outcome indicator represents the relative position of a county in the context of all 115 Missouri counties with '1' indicating the most positive finding.

How do I interpret the composite rank?

The composite county rank is a ranked index of the sum of the standardized outcome measures and represents the relative position of a county in the context of all 115 Missouri counties with '1' indicating the highest overall score.

How do I interpret the trend arrow?

The trend arrow indicates the direction of the indicator in a county over time. An arrow pointing upwards signals an improvement for seniors for that indicator. Conversely, an arrow pointing downward signifies a decline, while a horizontal arrow indicates that no change has occurred between the base and current years. A dash in the trend column indicates that the time element associated with that outcome measure is not sufficiently reliable to report change.

Glossary of Outcome Indicators

Household Composition

Seniors Filing Missouri Joint Income Tax Returns

By measuring the percent of persons age 65 or older that filed Missouri joint income tax returns in a county, we can infer the percent of Seniors living alone. *Source: Division of Taxation and Collection, Missouri Department of Revenue*

Economic Well-being

Supplemental Security Payments as Percent of Total Personal Income

Supplemental security income (SSI) payments are income-based benefits available to Seniors. In 2005, the SSI benefit for an individual who lives alone and has no other income is $579 a month, or 73 percent of the poverty line. People with countable assets of more than $2,000 for an individual and $3,000 for a couple are ineligible for SSI. *Source: Research and Evaluation, Missouri Department of Social Services*

Workforce Participation

Percent of Seniors Working for Pay

The percent of persons aged 65 or over in a county working for wages as calculated by averaging the number of persons 65+ working for wages during each quarter of 2005. *Source: The Longitudinal Employer –Households Dynamic Program, Missouri Economic Research and Information Center, Missouri Department of Economic Development*

Transportation

Proportion of All Seniors with Missouri Driver's License

The percent of seniors with a valid Missouri driver's license. *Source: Division of Motor Vehicle and Drivers Licensing, Missouri Department of Revenue*

Health Status

Hospitalization & ER Visits for Diabetes per 10,000 Seniors

The number of hospital and emergency room visits made per 10,000 seniors regarding diabetes and issues associated with diabetes. *Source: Data, Surveillance Systems, and Statistical Reports, Missouri Department of Health and Senior Services*

Health Care Access

Primary Care Physicians per 1,000 Seniors

The number of full time equivalent (FTE) primary care physician positions per 1,000 seniors. *Source: Department of Health Management and Informatics, University of Missouri*

Long-Term Care

Medicaid Costs for Long Term Care per Capita

Average Medicaid dollars per person spent on in-home and residential long-term care services. *Source: Section for Long-Term Care, Division of Regulation and Licensure, Missouri Department of Health and Senior Services*

Crime

Property and Violent Crime per 1,000 Persons

The number of property and violent crimes per 1,000 persons. *Source: The Missouri Statistical Analysis Center, Missouri Department of Highway Patrol, Missouri Department of Public Safety*

Senior Participation

Social and Civic Engagement Index for Seniors

Index of participation in Area Agencies on Aging congregate meal program, voter registration and voter participation in the past calendar year. *Sources: Missouri Area Agencies on Aging, Missouri Secretary of State, Boone County, County Clerk*

Glossary of Status Indicators

Demographics

Indicator	Definition
Total Population	Measures the total population for the years of 2000, 2005, 2010 and 2020. *Source: Table 2a. Projected Population of the United States, by Age and Sex: 2000 to 2050., "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," U.S. Census Bureau, 2005*
Change in Total Population	A measure of the change in population between 2000 and 2005. *Source: Table 2a. Projected Population of the United States, by Age and Sex: 2000 to 2050., "U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin," U.S. Census Bureau, 2005*
Population 65+	Measure of the total population that is 65 years old or older adjusted for the St. Louis City accepted challenge to the 2005 estimates. *Source: Table 1, Annual Estimates of the Population by Sex and Five-Year Age Groups for the United States: April 1, 2000 to July 1, 2005. Population Division, U.S. Census Bureau*
Percent of Population 65+	Measure of the percent of the total population that is 65 years old or older adjusted for the St. Louis City accepted challenge to the 2005 estimates. *Source: Table 1, Annual Estimates of the Population by Sex and Five-Year Age Groups for the United States: April 1, 2000 to July 1, 2005. Population Division, U.S. Census Bureau*
Population Projections 65+	A measure of both the total, male and female population that is 65 years old or older for the years of 2010 and 2020. *Source: Population projections are produced by OSEDA by using 2004 NCHS estimates for demographic cohorts. Cohort-survival ratios by race and sex were calculated as five year intervals using 1990 and 2000 census data as well as 2001-2004 estimates, including an adjustment for St. Louis City's accepted challenged of the 2004 estimates.*

Quality of Life

Indicator	Definition
Seniors in Owner-Occupied Housing	The percent of persons 65 years old and older living in owner-occupied housing.
Seniors Living in Families	The percent of persons 65 years old and older living in families.
Median Value of Owner-Occupied Housing	A measure of the median value, in dollars, of owner-occupied housing for persons 65 years old and older.
Seniors in Poverty	A measure of the percent of persons 65 years old and older who are living in poverty.
Average Income of Senior Households	A measure of the annual average household income, in dollars, for persons 65 years old and older.
Seniors with a College Education	A measure of the percent of persons 65 years old and older with a college degree or higher.

Source: Census 2000 Summary File 3 (SF 3) - Sample Data. U.S. Bureau of the Census

Glossary of Status Indicators

Health and Wellness

No Exercise	A measure of the percent of seniors who responded that they had not performed some sort of non-work related exercise during the past month.
No Sigmoidoscopy or Colonoscopy	A measure of the percent of seniors who responded that they have not had a screening test for colon cancer (sigmoidoscopy or colonoscopy) in the past 10 years.
High Blood Pressure	A measure of the percent of seniors who have been told they have high blood pressure by a doctor, nurse, or other health professional.
Obesity	A measure of the percent of seniors who have a body mass index greater than 25.00 (Overweight or Obese).
Smoking	A measure of the percent of seniors who are current smokers.
No Mammography	A measure of the percent of senior females who have not had a mammogram in the past year.
High Cholesterol	A measure of the percent of seniors who have had their cholesterol checked and have been told by a doctor, nurse, or other health professional that it was high.

Source: Behavioral Risk Factor Surveillance System (BRFSS), Data, Surveillance Systems and Statistical Reports. Missouri Department of Health and Senior Services. BRFSS data are reported as sub-state regional estimates disaggregated by age.

Resources

AARP
http://www.aarp.org/
Missouri state office:
700 West 47th St., Suite 110
Kansas City, MO 64112-1805
Phone: (Toll-Free) 866-389-5627
Fax: 816-561-3107

Adult Protective Services
http://www.dhss.mo.gov/ProtectiveServices/
Provides protective oversight to people who are unable to manage their own affairs, carry out activities of daily living, or protect themselves from abuse, neglect, or exploitation.

Missouri Department of Health and Senior Services
Division of Senior and Disability Services
PO Box 570
Jefferson City, MO 65102
Phone: (Toll-Free) 800-235-5503

Community Connection
http://www.communityconnection.org/
A statewide database of community and aging resources.

Community Connection
602 Clark Hall
Columbia, MO 65211
Phone: (Toll-Free) 888-463-6221 (for non-Columbia residents)
573-884-3554 (for Columbia residents)

Community Development
The Department of Health and Senior Services Community Development Unit and the University of Missouri Extension partner to provide assistance to communities interested in developing a community plan that will address issues identified in the Missouri Senior Report.

Community Development Unit
Missouri Department of Health and Senior Services
PO Box 570
Jefferson City, MO 65102-0570
573-751-6168

Elder Abuse and Neglect Hotline, 800-392-0210 (Toll-Free)
TDD 800-669-8819 or Relay Missouri 800-676-3777
http://www.dhss.mo.gov/ElderAbuse/
The hotline responds to reports of alleged abuse, neglect or financial exploitation of Missourians at least 60 years old and other eligible adults between 18 and 59.

Missouri Department of Health and Senior Services
Division of Senior and Disability Services
Elder Abuse and Neglect Hotline
PO Box 570
Jefferson City, MO 65102-0570
Phone: 573-751-4842

Employee Disqualification List
http://www.dhss.mo.gov/EDL/
Lists individuals who have abused, neglected or misappropriated funds of a resident, patient, or client while employed in a Missouri nursing home, hospital, home health agency, or ambulatory surgical center.

Missouri Department of Health and Senior Services
Employee Disqualification List
PO Box 570
Jefferson City, MO 65102-0570
Phone: 573-526-8544 or 573-522-2449

Resources

Governor's Advisory Council on Aging
http://www.dhss.mo.gov/GovAdvisoryCouncil/
Provides advice to Missouri's governor to enhance the quality of life, independence and dignity of older Missourians.

Governor's Advisory Council on Aging
Division of Senior and Disability Services
Missouri Department of Health and Senior Services
PO Box 570
Jefferson City, MO 65102-0570
Phone: 573-526-8534

Home and Community Services, Missouri Department of Health and Senior Services
http://www.dhss.mo.gov/HomeComServices/
Provides support services to help ill or disabled older Missourians remain in their own homes and avoid or delay institutionalization.

Division of Senior and Disability Services
Home and Community Services Field Operations
Missouri Department of Health and Senior Services
PO Box 570
Jefferson City, MO 65102-0570
Phone: 573-526-8537

Medicare
http://www.medicare.gov/
Medicare beneficiaries can view their claim status (excluding Medicare Part D claims); order a duplicate Medicare Summary Notice or replacement Medicare card; view eligibility and entitlement information; view enrollment information for Medicare Part D prescription drug plans and Part B deductible status.

Centers for Medicare and Medicaid Services (CMS)
7500 Security Blvd.
Baltimore, MD 21244-1850
Phone: (Toll-Free) 800-MEDICARE for general information
TTY for Hearing Impaired: (Toll-Free) 877-486-2048
To report Medicare fraud & abuse: (Toll-Free) 800-447-8477

Missouri Alliance of Area Agencies on Aging
http://www.MoAging.com
Ten Area Agencies on Aging develop and implement programs and services for older Missourians at the local level.

Missouri Alliance of Area Agencies on Aging (MA4)
1121 Business Loop 70 East
Columbia, MO 65201

Missouri Attorney General's Consumer Protection Division
http://www.ago.mo.gov/divisions/consumerprotection.htm
Protects Missourians from telephone fraud; car repair, sales disputes and rip offs; telemarketing, Internet and e-mail scams; home repair rip offs; travel scams; and banking and credit card fraud.

Missouri Attorney General's Office
Supreme Court Building
207 W. High St.
PO Box 899
Jefferson City, MO 65102
Consumer Protection Hotline: (Toll-Free) 800-392-8222

Resources

Missouri Long-Term Care Ombudsman Program
http://www.dhss.mo.gov/Ombudsman/
Ombudsmen investigate and resolve complaints for residents in nursing homes and other long-term care settings.

State Office of Long-Term Care Ombudsman Program
Missouri Department of Health and Senior Services
PO Box 570
Jefferson City, MO 65102-0570
Phone: (Toll-Free) 800-309-3282

MOSAFE – Missourians Stopping Adult Financial Exploitation
http://www.dhss.mo.gov/MOSAFE/index.html
Financial exploitation of the elderly and disabled is a crime and destroys thousands of Missouri lives. MOSAFE was launched to help stop it.

Missouri Department of Health and Senior Services
MOSAFE
PO Box 570
Jefferson City, MO 65102
Phone: (Toll-Free) 800-235-5503

National Family Caregiver Support Program (NFCSP)
http://www.aoa.gov/prof/aoaprog/caregiver/overview/overview_caregiver.asp

Department of Health and Human Services
Administration on Aging (AoA)
Washington, DC 20201
Phone: 202-619-0724

Show Me Long-Term Care
http://www.dhss.mo.gov/showmelongtermcare/
You can find out how any licensed Missouri long-term care facility did on its last inspection.

Section for Long Term Care
Missouri Department of Health and Senior Services
PO Box 570
Jefferson City, MO 65102-0570
Phone: 573-526-8524

Social Security Administration
http://www.ssa.gov/
Pays retirement, disability and survivor benefits to workers and their families and issues Social Security cards. For information about the Social Security office that serves your area, go to: https://s044a90.ssa.gov/
Phone: (Toll-Free) 800-772-1213
(Toll-Free) TTY for Hearing Impaired: 800-325-0778

A more extensive list of resources may be found at www.missouriseniorreport.org or on the Missouri Department of Health and Senior Services' Web site at www.dhss.mo.gov.

Missouri

	MO	US
Population 65+, 2005	784,467	36,790,113
Percent Change 65+ Population, 2000-2005	3.8%	3.9%

Outcome Indicators

	Year	Measure	Trend
Household Composition			
Seniors Filing Missouri Joint Income Tax Returns	2000 2004	44.8% 44.3%	▼
Economic Well-being			
SSI Payments as Percent of Total Personal Income	2001 2003	0.33% 0.33%	↔
Workforce Participation			
Percent of Seniors Working for Pay	2001 2004	9.8% 10.9%	▲
Transportation			
Percent of All Seniors with Missouri Driver's License	2001 2005	76.7% 79.6%	▲
Health Status *			
Hospitalizations & ER Visits for Diabetes per 10,000 Seniors	2000 2003	68.3 71.1	▼
Health Care Access			
Primary Care Physicians per 1,000 Seniors	2000 2004	5.1 5.5	▲
Long Term Care **			
Medicaid Costs for Long Term Care per Capita	2002 2005	$122 $147	▼
Crime			
Property & Violent Crime per 1,000 Persons	2001 2005	48.8 43.9	▲
Senior Participation			
Social and Civic Engagement Index for Seniors	*(Trend data not available)* 2005	42.4%	-

Status Indicators

		MO Measure	US Measure
Demographics	Total Population, 2000	5,606,246	281,421,906
	Total Population, 2005	5,800,310	296,410,404
	Percent Change Total Population, 2000-2005	3.3%	5.3%
	Population 65+, 2000	755,824	34,978,972
	Percent of Population 65+, 2000	13.5%	12.4%
	Percent Female	59.3%	58.9%
	Percent Male	40.7%	41.1%
	Percent of Population 65+, 2005	9.6%	12.4%
	Percent Female	58.0%	58.1%
	Percent Male	42.0%	41.9%
	Population Projections 65+, 2010	14.9%	13.0%
	Percent Female	56.8%	57.7%
	Percent Male	43.2%	42.3%
	Population Projections 65+, 2020	18.2%	16.3%
	Percent Female	55.1%	56.5%
	Percent Male	44.9%	43.5%
Quality of Life	Seniors in Owner-Occupied Housing, 2000	79.1%	77.6%
	Seniors Living in Families, 2000	61.3%	64.0%
	Median Value of Own House, 2000	$86,900	$111,800
	Seniors in Poverty, 2000	9.9%	10.9%
	Average Household Income of Seniors, 2000	$37,822	$41,712
	Seniors with a College Education, 2000	11.8%	15.4%
Health and Wellness	No Exercise, 2005	34.7%	34.0%
	No Sigmoidoscopy or Colonoscopy, 2004	39.4%	36.7%
	High Blood Pressure, 2005	54.8%	54.8%
	Obesity, 2005	21.6%	21.0%
	Smoking, 2005	9.2%	8.9%
	No Mammography, 2004	28.8%	24.9%
	High Cholesterol, 2005	55.3%	50.5%

** Three year average 1999-2001 and 2002-2004* ***Not included in composite county rank*