

a portrait of our •

# aging

population in northern virginia

2014 REPORT PRESENTED BY THE COMMUNITY  
FOUNDATION FOR NORTHERN VIRGINIA



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*Appendices are available in Volume II*

During FY2013, the  
Community Foundation  
awarded more than

**\$450,000**

in grants to local nonprofits,  
schools and community  
based programs.

## The Community Foundation for Northern Virginia: A Resource for Knowledge and Strategic Giving

The Community Foundation for Northern Virginia helps make philanthropy more powerful and effective. We are grant makers who provide financial support to nonprofits and programs having the largest positive impact in our region. We are community leaders who commission data driven research on critical community needs and share it with the community. We are conveners of problem-solvers and like minded philanthropists, working together to strengthen the common good.

During FY 2013, the Community Foundation awarded over \$450,000 in grants from discretionary funds to local nonprofits, schools and community based programs, awarded \$209,000 in scholarships, and reported over \$32,000,000 in managed assets.

We commissioned and published this report in an effort to call attention to current and emerging needs of the aging population in Northern Virginia. The findings of the report help us to better understand those needs and plan for the future needs of our aging neighbors. As such, the report is a useful resource for philanthropists who want to grow the impact of their giving in this field of interest and for others in our community charged with the task of planning for the future.

We hope the data offered here will inform, inspire meaningful dialogue, and increase philanthropic and public investment to meet the needs of our aging population.



## Executive Summary contents

- Population Trends
- Economic and Social Circumstances
- Health
- Living Arrangements and Long Term Care
- Older People in Immigrant Families

## Introduction

The older population of Northern Virginia, those age 65 or more, is more economically stable, better educated and more diverse than the older population in the United States and Virginia. Currently the region's population is also younger and healthier, skewed toward the younger end — those 65 to 74 years of age. But in Northern Virginia, as in the rest of the nation, a significant population shift is occurring. The portion of the population 65 years of age and older will increase steadily over the next two decades. This change, coupled with increased longevity will result in significant growth in older populations nationally, statewide and locally.

The research for this report was commissioned by the Community Foundation and performed by Dean Montgomery of the Health Systems Agency of Northern Virginia. It examines the implications of population aging in Northern Virginia. It focuses on recent and projected growth of the region's older population, those who are 65 years of age and older. Demographic, economic, social and health data and indices are examined to develop a profile of the region's elderly and to identify the circumstances and conditions that affect their well-being. This executive summary highlights some of the key findings. For more information and complete citations, find the full report at [www.cfnova.org](http://www.cfnova.org).

Between 2010 & 2030, the number of older individuals in Northern Virginia will grow by **76%**



## The older population in Northern Virginia will grow rapidly over the next two decades.

Northern Virginia is home to over 2 million people. The population of the region has grown rapidly for several decades, more than doubling since 1980. Northern Virginia's population is also maturing. Over the last decade (2000 - 2010) the percentage of the population over age 65 grew at twice the rate of the population under 65 (42% growth vs. 21% growth.)

In general, the population of Northern Virginia is younger than the rest of the state and the nation

**The impact of the aging population is likely to be felt more strongly in Northern Virginia than elsewhere.**

as a whole. People over the age of 65 make up a smaller share of the population

than statewide or nationally. Currently 8.6% of the population of Northern Virginia is over the age of 65, as compared to 12.2% of the population of Virginia and 13% of the population as a whole. The percentage of the population ages 65 years and older will remain below national levels, but the rate of growth over the next two decades will be much higher. As a result, the impact of the aging population is likely to be felt more strongly in Northern Virginia.

### The Facts

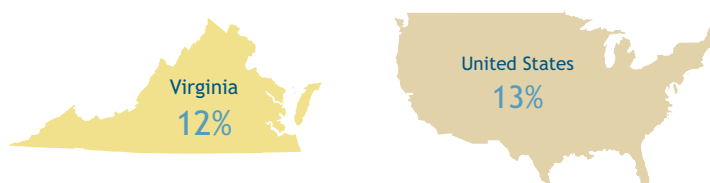
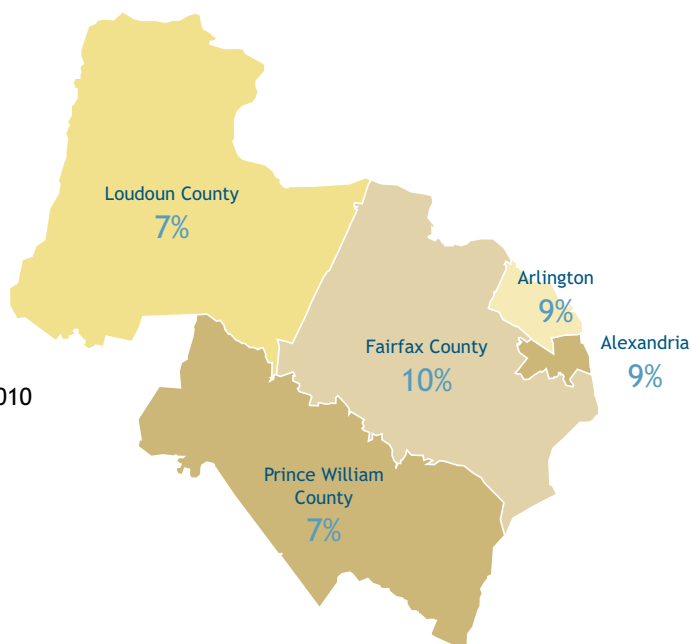
- In 2010 there were 192,589 people 65 years of age or older. That number is expected to increase to 326,500 individuals by 2020 and 429,300 individuals by 2030. By 2030 15% of the population of Northern Virginia will be over the age of 65.
- Currently Alexandria and Fairfax County have the highest percentage of the population ages 65 and older (9.1% and 9.9%).
- In the United States the population over 65 is projected to grow 49% between 2010 and 2030. The number of older individuals in Northern Virginia will grow 76% in that same period of time.
- The region's most rapidly growing population is those 75 years of age and older. Growth in this group is expected to exceed 50% in each of the next two decades. By 2030 there will be more than 182,000 residents 75 years of age and older, approximately 40% of the population over 65. This older group is typically the most needy and dependent part of the population.

### Northern Virginia Population

Percent of Population ≥65 Years of Age, 2010

Source: U.S. Census Bureau, 2010

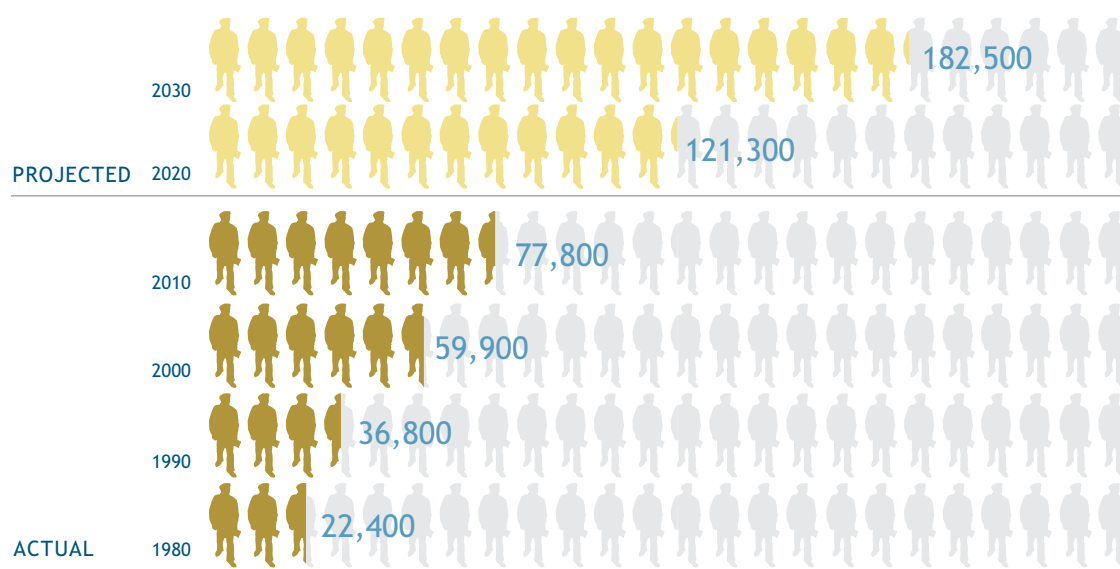
(Fairfax County Includes Falls Church City & Fairfax City; Prince William County includes Manassas & Manassas Park)



### Northern Virginia Population Change

Northern Virginia Population ≥75 Years of Age Population Change, 1980-2030

Source: U.S. Census Bureau, 1980-2010; Virginia Employment Commission, 2020 & 2030 Population Projections



More than  
**20,000**  
 older Northern Virginians  
 live in poverty.



## Significant numbers of older people in Northern Virginia are economically vulnerable

As a region, Northern Virginia is comparatively affluent. Household incomes in all local jurisdictions are higher than state and national levels. Higher average and median household incomes reflect both better local salaries and higher employment rates. This pattern holds for the region's older population. In general, retirement income for older adults is

basic necessities. Though more than half of older households in Northern Virginia report annual income of at least \$50,000, more than 20% have income of less than \$30,000 a year. Of these households, nearly 6,000 have income of less than \$10,000 annually.

There is evidence that rates of economic insecurity in the older population are on the rise. Economic

**In Northern Virginia 28% of older households can be considered economically insecure, and an additional 31% are financially vulnerable.**

higher, and older adults are more likely to be in the workforce than older populations elsewhere.

Nationally the rate of poverty in the older population is significantly less than the general population due to economic support programs such as Social Security, and Medicare (9.5% of older adults below poverty vs. 13.8% of the general population). However, that pattern is not evident in Northern Virginia. Over the last five years (2006 - 2010) the poverty rate among Northern Virginia's older population has been comparable to, or higher than, the rate in the nonelderly population.

In most communities a family needs an income of about twice the federal poverty level, or about \$30,260 for a family of two in 2012, to cover

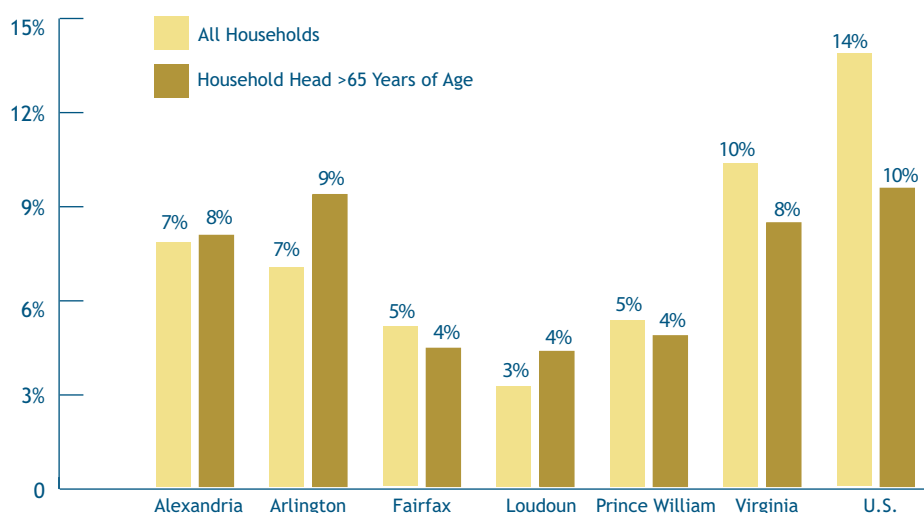
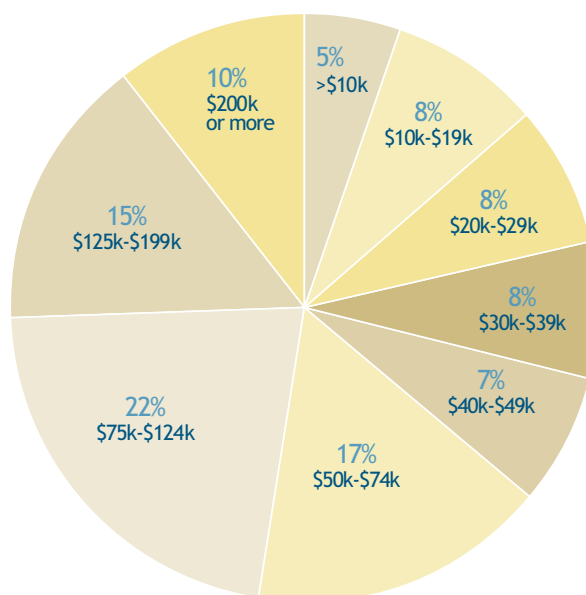
insecurity refers to circumstances where individuals and households are forced to choose between competing essential personal and household needs. This can mean routinely having to choose between spending on food, housing, medical care,

transportation and other expenses. Economic insecurity is measured by financial stability and security indices that factor in assets and cost of living. Nationally, economic insecurity among older households increased by about one third, from 27% to 36% between 2004 and 2008. In Northern Virginia 28% of older households can be considered economically insecure, and an additional 31% are financially vulnerable. Those who are financially vulnerable have a limited ability to handle the costs associated with an unexpected major illness or other destabilizing event. Rising economic insecurity among the older population appears to be driven largely by three factors: insufficient income, declining assets and rising housing costs.

### Household Income

Northern Virginia Households with Households Headed by Member  $\geq 65$  Years of Age

Source: U.S. Census Bureau, 2008-2010  
American Community Survey



### Northern Virginia Household Income

Percent of Households Below 100% of the Poverty Level in the Past Twelve Months

Source: U.S. Census Bureau, 2006-2010  
American Community Survey

## The Facts

- More than 20,000 older Northern Virginians live in poverty, or near poverty, with the attendant implications and consequences. This number is likely to approach 50,000 by 2030.
- Older women are at greater risk of living in poverty. The median household income of a woman over age 65 living alone is \$32,772, compared to \$52,501 for a man over age 65 living alone.
- Alexandria and Arlington have the highest percentages of older households below the poverty level (8.0% of households and 9.3% of households). Loudoun County has the lowest, with 4.3% of elderly households below poverty.
- The poverty rate for older households exceeds the rate of other households in Alexandria, Arlington and Loudoun Counties.
- There is a high correlation between poverty and disability among the older population. More than 48% of older Northern Virginians with incomes below the poverty level have one or more disability.



The rate of older adults without health insurance in Northern Virginia is about **3X higher** than the national and Virginia rates.

## Older people in Northern Virginia are comparatively healthy, but a surprising number of the region's older people are uninsured.

Health is an enduring concern among the older population. Good health is tied to independence, economic stability and quality of life. The region's

**8.5% of older residents are not eligible for Medicare – more than twice the Virginia and US rates.**

older population is comparatively healthier than populations in the US, with higher than average rates of participation in

health screening and monitoring and lower rates of hospital admission and emergency room usage.

While the overall population is healthier, a substantial number of older residents have no health insurance. 8.5% of older residents are not eligible for Medicare, largely due to their immigration status. This is more than twice the Virginia and US rates of about 4% without Medicare coverage. Nearly 3% of Northern Virginians ages 65 years and older are uninsured, compared with 1% statewide and nationally. To qualify for Medicare, an adult over 65 must have worked for at least four years (or 10 quarters), or be the spouse of someone who has worked for at least four years.

Physical and mental disabilities are major concerns in an aging population. Most disabilities among older

### The Facts

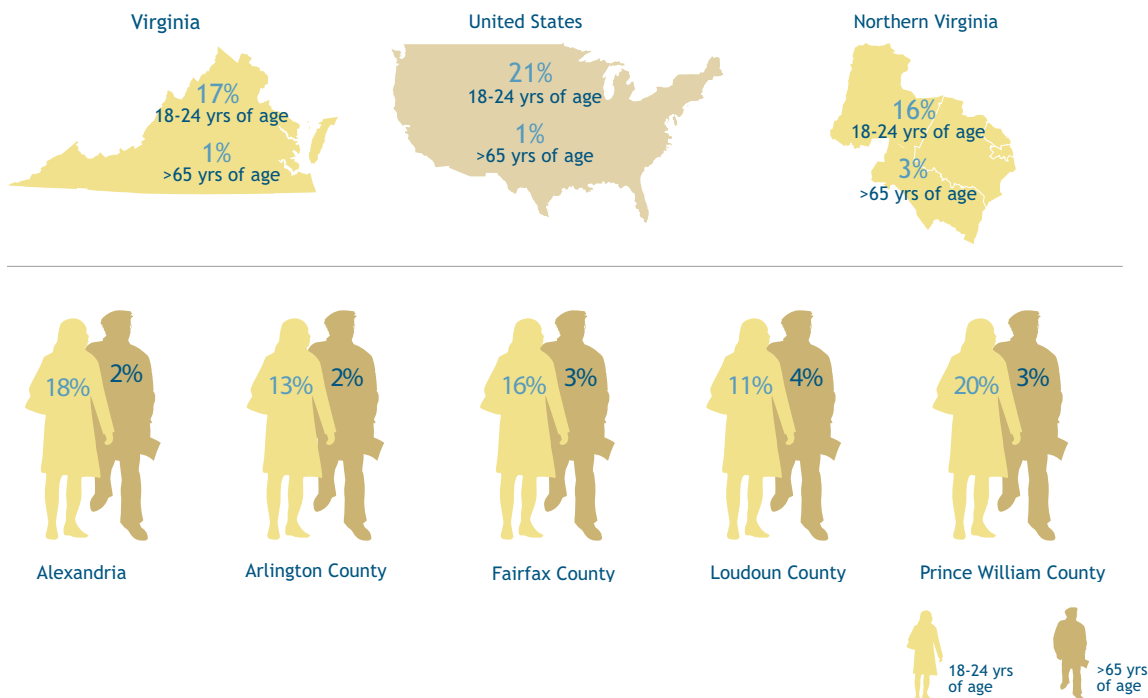
- The rate of older adults without health insurance in Northern Virginia is about three times higher than the national and Virginia rates.
- Northern Virginians have comparatively low rates of chronic conditions. Region wide about 40% report having a chronic condition, 10% below the rest of Virginia and 20% below US chronic disease levels.
- More than one-third of those ages 65 and older report that they are limited in some activities because of a disability.

adults result from deteriorating chronic conditions and injury, notably from strokes and fractures resulting from falls. The effects (economic, social, health) of physical and mental disabilities usually extend well beyond the individual, often affecting both immediate and extended families. Older residents with disabilities are more likely to require emergency, inpatient hospital care and rehabilitation, and are at greater risk of maltreatment and abuse due to social isolation and dependence on caregivers.

## Health Insurance Coverage

Northern Virginia Population Adults 18-64 Years of Age and ≥65 Years of Age Percent Uninsured, 2009-2011

Source: U.S. Census Bureau, 2009-2011 American Community Survey; Calculations, HSANV, 2012

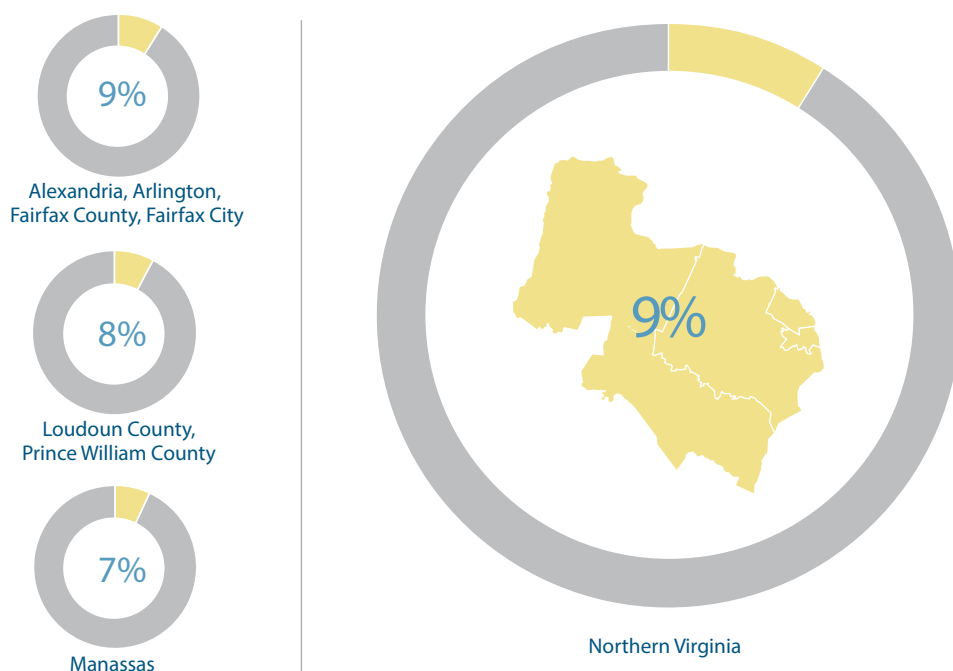


## Health Insurance Coverage

Percent of Northern Virginia Residents ≥65 Years of Age without Medicare Coverage

Source: U.S. Census Bureau, 2008-2010 American Community Survey

(Fairfax County includes Falls Church; Prince William County includes Manassas Park)





Demand for assisted living services has more than  
**doubled**  
 over the last two decades.

## More support programs will be needed to help seniors age in place.

Research shows clearly that older people prefer to remain independent and self sufficient for as long as possible. These preferences are often expressed as a desire to remain in their own home or to “age in place.” But reduced economic means and increasing disability and dependence make it difficult for many older persons to obtain living arrangements

### Older Northern Virginians are using traditional nursing home care at about half the rate of the rest of the State of Virginia.

appropriate to their needs and circumstances. This is especially true in Northern Virginia where housing and housing related costs are so high.

The region has seen a shift away from nursing home care for older residents. Utilization rates of nursing homes for older individuals in Northern Virginia have declined over last 25 years. Currently older Northern Virginians are using traditional nursing home care at about half the rate of the rest of the State of Virginia. This is likely due to the fact that Northern Virginia’s older population are comparatively younger (under 75 years of age) and healthier. It may also have to do with the wealth of support services available in Northern Virginia, such as home health care and assisted living.

As people age they are likely to require additional support to remain independent. Assisted living services are a growing option for some. Assisted living refers to living arrangements that include support services, such as housekeeping, meal preparation and assistance with the activities of daily living. Though reliance on assisted living services is growing, access is limited. Currently there are 88 licensed assisted living facilities in Northern Virginia. These facilities have 6,818 residential units, and currently house between 2 and 3% of the older population.

In addition to the lack of capacity to serve more people, assisted living is also prohibitively expensive. There is no federal support for assisted living services; they are not covered by Medicare or Medicaid. Those needing assisted living facilities must pay with private funds. The current cost of assisted living facility residence in Northern Virginia ranges from about \$3,000 per month to more than \$7,000 per month. With an average cost of \$50,000 per year the cost is out of reach for many seniors.

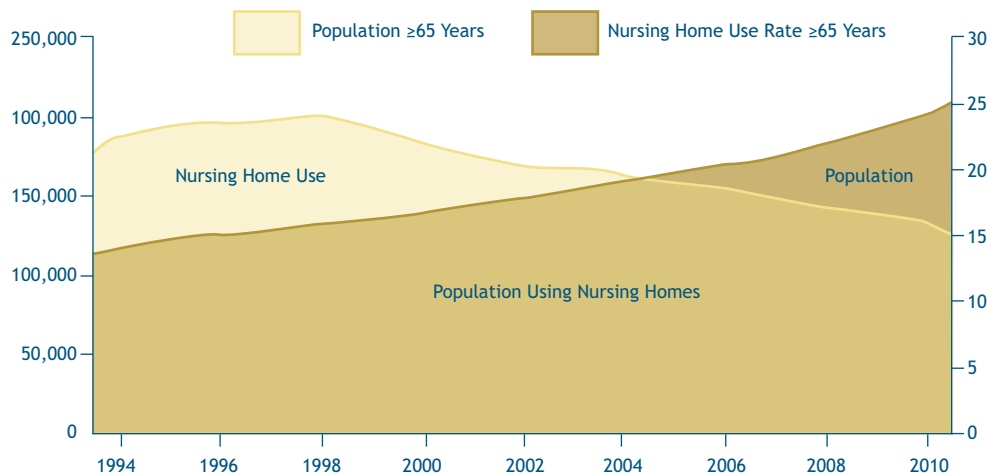
The reality of increasing numbers of seniors aging in place is that support programs for activities of daily living such as shopping, meal preparation, and transportation, will be more important than ever. The need for such services will grow exponentially as the population increases in the next two decades.

## Northern Virginia Nursing Home Use

Northern Virginia Residents in Northern Virginia Nursing Homes

Residents per 1,000 population ≥65 Years, 1994-2010

Source: Virginia Nursing Home Patient Origin Surveys 1994, 1998, 2002, and 2006; Virginia Health Licensure Surveys 2007-2010; U.S. Census 1990-2010 Bridged Population Estimates for DHHS/CDC/NCHS, CDC Wonder On-line Data 2013; Calculations & Tabulations HSANV, 2012.



## The Facts

- In spite of the increase in the older population, the utilization of nursing homes is on the decline.
- About one-third of older Northern Virginians live alone. 72% of these are women, with single woman headed households outnumbering single male headed households by a margin of 2.6 to 1.
- Both demand for and capacity of assisted living services have more than doubled over the last two decades. There are now 88 assisted living facilities in Northern Virginia.
- The cost of assisted living facility residence in Northern Virginia is well beyond the means of thousands of older residents who would benefit from this service.

**Twice** as many  
older Northern Virginians  
live with a relative other  
than a spouse than the  
national average.



## The region's many immigrant families include generations of older members.

Northern Virginia has a large immigrant population, with relatively high percentages of foreign born, naturalized and non-citizens. The percentage of the population that is foreign born is about twice the national percentage and about 2.5 times the state rate. Many of these residents do not speak English well. About one-third of Northern Virginia households commonly speak a language other than English — more than twice the percentage statewide and nationally. Nearly 14% of Northern Virginia households can be

Immigrant families bring many benefits to our communities, including strong extended families and cohesive communities. The high number of immigrant families may account for the large number of older adults living with family members other than a spouse. More than 16% of older Northern Virginians live with a relative other than a spouse. This is twice the rates in Virginia and the United States. These older Northern Virginians may be living in extend family arrangements with their children and grandchildren.

### A large percentage of linguistically isolated households in Northern Virginia have a member that is over the age of 65.

considered “linguistically isolated,” which means that they have difficulty communicating and functioning normally in English. This is three times the rate of linguistically isolated households in Virginia and the United States. A disproportionally large percentage of linguistically isolated households in Northern Virginia have a member that is over the age of 65.

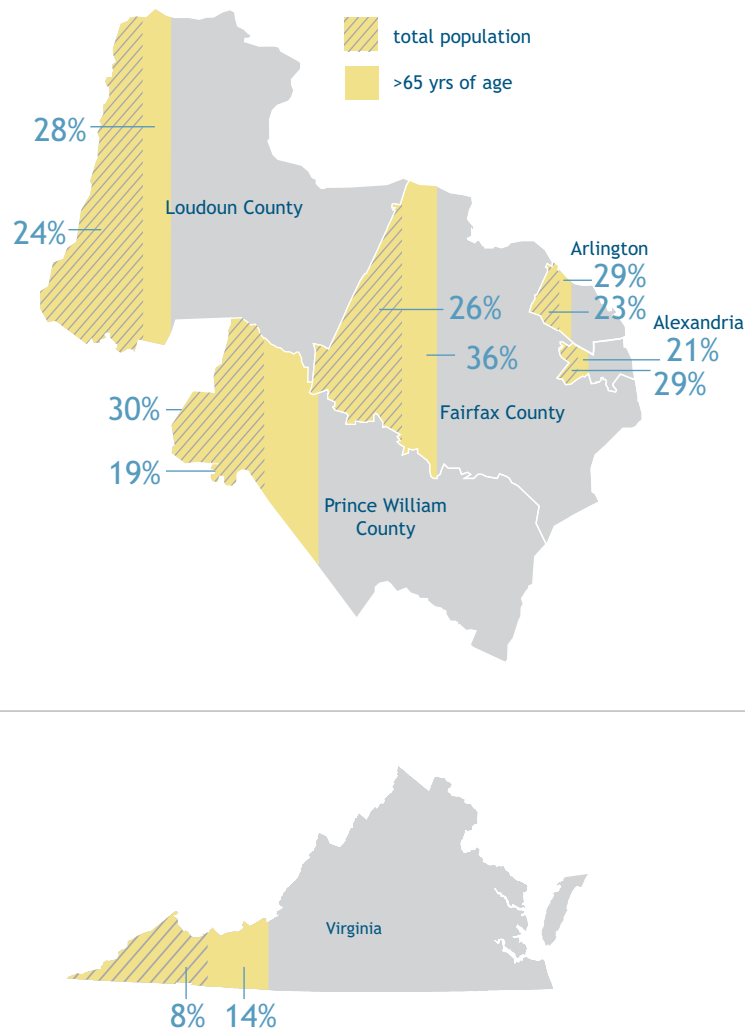
The presence of older family members can provide mutual support to the family. Older members can help with childcare, and in turn receive support as they age. The danger, however, could be family stress due to caregiving responsibilities, financial strain due to medical expenses, and possible social isolation for the elderly relative. In any case, the presence of so many extended families in our communities has implications for service providers and policy makers.

## Linguistic Isolation

Percent of Households Where Other than English is Spoken at Home

Source: U.S. Census Bureau, 2006-2010 American Community Survey

(Fairfax County Includes Falls Church City & Fairfax City; Prince William County includes Manassas & Manassas Park)



## The Facts

- More than 16% of older Northern Virginians live with a relative other than a spouse. This is nearly twice the percentage elsewhere in VA and nationwide. Higher percentages of older residents living in extended families can be found in Loudoun and Prince William counties.
- More than 27% of older Loudoun County residents live with extended family. This is likely due to the regions more complex and diverse demography.



# The appendix

of 164 pages of supporting data can be downloaded from [www.cfnova.org](http://www.cfnova.org).

## Challenges and Opportunities

Currently Northern Virginia's older adults are healthier and more economically stable than older populations elsewhere. If tapped, these older adults can be a great resource to their communities. But the projected growth in the numbers of older adults and the aging of the older adult population mean that more people will be in need of support and services in the coming decades. Social policies that support older adults will be more important than ever. In particular, policy makers may want to consider the following recommendations.

- **Invest in support services for older residents.** With the cost of assisted living out of reach for many and a decline in nursing home usage, more older adults will need support to age in place.
- **Expand housing options for seniors** who are no longer able to live independently.
- **Support families who are caring for aging family members at home.** Planners serving older populations should be aware of the presence of linguistically isolated seniors who may be living with relatives. As older relatives age, these families may require support.

*The research for this report was performed by Dean Montgomery of the Health Systems Agency of Northern Virginia.*



## Section I

### Introduction

#### 1. *Area of Concern: Northern Virginia*

Northern Virginia consists of the geography and population of nine independent political jurisdictions:

- **Four counties** – Arlington, Fairfax, Loudoun and Prince William;
- **Five independent cities** – Alexandria, Fairfax, Falls Church, Manassas and Manassas Park.

In addition to these jurisdictions, there are fourteen incorporated towns within the borders of Fairfax, Loudoun and Prince William counties.

The boundaries of this region are conterminous with those of Planning District (PD) 8, one of Virginia's 21 multipurpose regional planning areas.

Northern Virginia is demographically distinct. It is Virginia's youngest, most urban, best educated, most affluent, and most densely populated planning region.



#### 2. *Purpose*

This report examines the implications of population aging in Northern Virginia. It focuses on recent and projected growth of the region's older population, those 65 years of age and older. Demographic, economic, social, and health data and indices are examined to develop a profile of the region's elderly and to identify the circumstances and conditions that affect their wellbeing.

#### 3. *Data Sources, Methods*

Data and information examined come principally from primary sources. Those of particular value and extensive use include:



- U.S. Decennial Census Reports, 1980, 1990, 2000, and 2010-2012, U.S. Bureau of the Census;
- American Community Survey Reports, U.S. Census Bureau, 2006 – 2010, 2008 – 2010, and 2007-2012;
- *Virginia Vital Statistics, Annual Reports and Database*, Virginia Department of Health, 1980, 1990 and 2000 through 2010;
- *Virginia Statewide Nursing Home Patient Origin Surveys, 1985—2006*;
- *Virginia Hospital Discharge Datasets, 2000—2010*, Virginia Health Information, 2012;
- *Virginia Hospital and Nursing Home Annual Licensure Survey Datasets, 2000—2010*, Virginia Health Information, 2012.

Virginia vital and health statistics, decennial census data, nursing home and hospital admission and discharge information are from primary data sets. Most of these data are counts of the population and of social, economic, and health characteristics of subsets of the population. Unless indicated otherwise, the data reported are for the population 65 years of age and older.

Use of these primary data sets makes it possible to examine population characteristics at discrete levels, which permits identification of regional (Northern Virginia), jurisdictional, and in some instances sub-regional conditions and circumstances.

Secondary sources consulted consist largely of recent publications that report and assess the social, economic, and health conditions and circumstances of older populations nationwide and Virginia statewide. This information provides background and benchmark data with which Northern Virginia experience may be compared. The publications, and related data, consulted include:

- *Interim Report on Development of the Index of Well-being in Older Populations*, Population Reference Bureau (Kaneda, Lee, Pollard), 2010;
- *National Healthcare Disparities Report, 2007*, Agency for Health Care Research and Quality, US Department of Health and Human Services, 2008;
- *Health, United States, 2010: With Special Feature on Death and Dying*. National Center for Health Statistics, 2011;
- *Major Demographic Forces Shaping Northern Virginia's 2030 Workforce: A Look to the Future*, Northern Virginia Regional Commission (Billingsley), 2011;
- *2012 Statistical Report*, Virginia Department of Social Services, 2012;
- *Mental Health, United States, 2010*. HHS Publication No. (SMA) 12-4681. SAMHSA. (2012);
- *Virginia Atlas of Community Health 2012*, Community Health Solutions, 2012;
- Older Dominion Partnership, 2011 *Virginia Age Ready Indicators Benchmark Surveys (City of Alexandria, Arlington County, Fairfax County, Loudoun County, Prince William County, and State of Virginia)*, November 2011;
- *CDC Health Disparities and Inequalities Report—United States 2011*, US Department of Health and Human Services 2011.



#### **4. *Method of Presentation***

Where data permit meaningful comparison and analysis, Northern Virginia and local jurisdiction indices are compared and contrasted with those of Virginia and the U. S.

Where a Northern Virginia measure is compared with the state of Virginia, unless otherwise indicated the state statistic includes the Northern Virginia data. Because most Northern Virginia indices differ significantly from those for the rest of the state, this method necessarily usually understates the actual difference between Northern Virginia and the state as a whole. The understatement is in the direction of the difference(s) reported.

Data are presented for all principal Northern Virginia jurisdictions. This permits examination of intraregional differences and patterns. Data collection and reporting methods and practices necessitate that for many indices the independent cities within Fairfax and Prince William counties be combined with those counties for many of the indices examined. Unless otherwise indicated, City of Falls Church and Fairfax City are included in Fairfax County data and Manassas and Manassas Park are included in Prince William County data.

#### **5. *Limitations***

The principal limitation in the data presented is that some is based on sample population surveys. Synthetic estimates are derived from these data sets for specific subsets of the population. These data are inherently less precise than information from data sets that are counts of the entire population being examined.

Another important limitation is that some data sets do not distinguish between the non-Hispanic White and the Hispanic populations. The principal implication of this imprecision is that in some instances rates for those of Hispanic ancestry are underestimated and those for non-Hispanic Whites are overestimated. A related concern is that because of this imprecision in some cases reported disparities between Black and White populations underestimate the actual differences.

Though not an inherent limitation, it is noteworthy that collection, tabulation and publication of U. S. census data changed over the last decade (2000-2010). Decennial census reports contain counts and estimates for the year in which the census was taken. American Community Survey (ACS) data report average and median counts and estimates over recent three and five year periods. Source notes for ACS data specifies the reporting period for the data presented.



## Section II

### Northern Virginia Population Aging

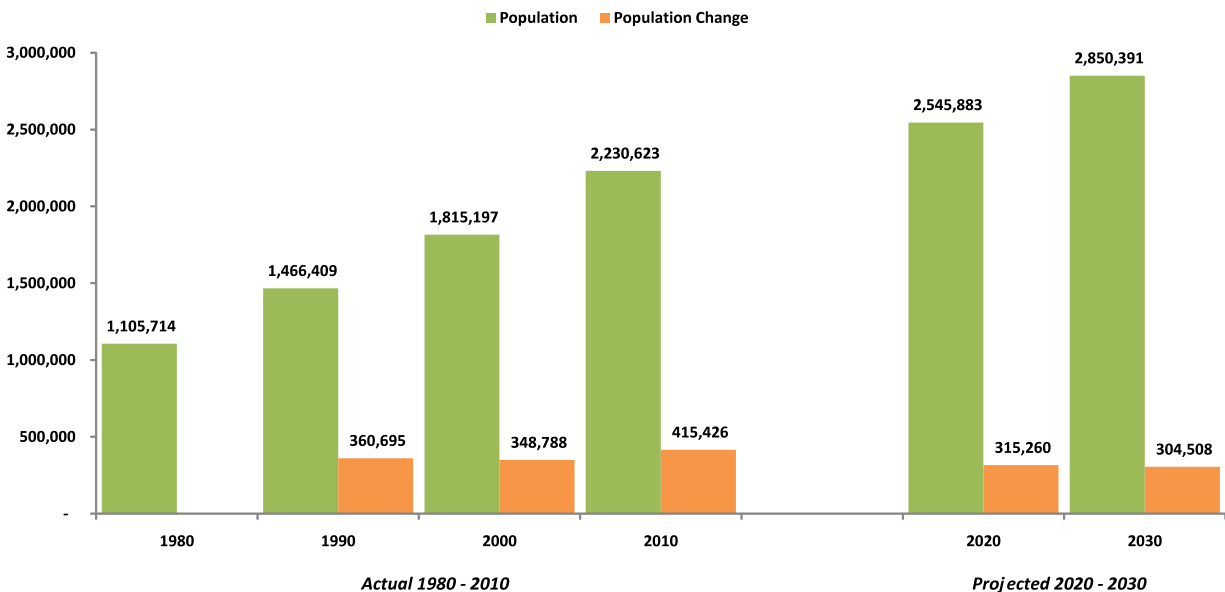
#### 1. Population Size, Growth

Northern Virginia's population has grown rapidly for several decades, more than doubling since 1980. The region has added, on average, about 375,000 residents per decade during the last 30 years (Figure 1). According to the most recent census, Northern Virginia had 2,230,623 residents in 2010.<sup>1</sup> The estimated 2011 population was 2,281,760, an increase of about 2.3% from 2010.

Substantial population growth is expected to continue for several decades, but at a slower pace. More than 400,000 residents were added to the region during the last decade (2000 – 2010), the largest recorded decennial increase. Aggregate population growth between 2010 and 2020 is expected to be about 315,000, and about 620,000 over the next two decades (Figure 1). Most projections suggest that the region is likely to have about 2.9 million residents by 2030.<sup>2</sup>

Figure 1

Northern Virginia Population  
Population and Population Change, 1980 - 2030



Source: U.S. Census 1980-2010; Virginia Employment Commission, 2020 - 2030 Population Projections

The regional rate of population growth is expected to decline from about 23% during the last decade (2000 – 2010) to about 14% in the current decade (2010 – 2020) and to 12% between 2020 and 2030. Though much lower than the large percentage increases of the last three decades, the double digit increases projected for the next two decades are from a larger base population and are substantially higher than growth rates expected at the state and national levels. Relatively high rates



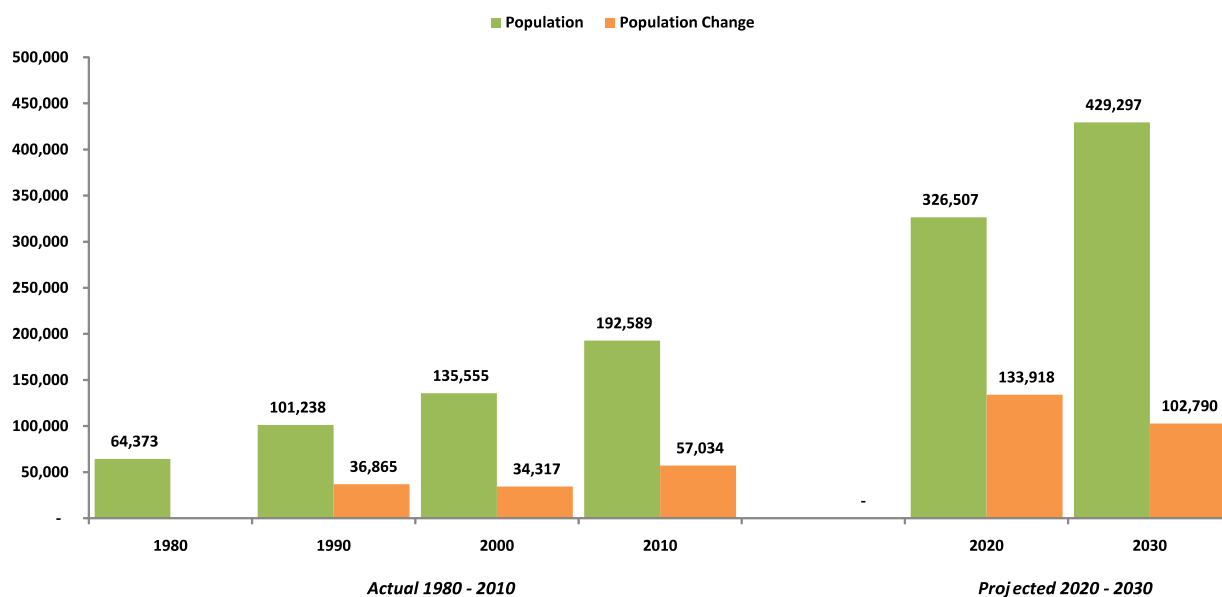
of growth, substantial population increases, and increasing diversity will remain the dominant regional population trends over the next two decades.

## 2. Population Aging

In addition to growing rapidly, Northern Virginia's population is maturing. Over the last three decades, the older population<sup>1</sup> grew at a faster rate than the overall population. The population  $\geq 65$  years of age increased about three fold between 1980 and 2010, during which the overall population increased about two fold. Over the last decade (2000 – 2010), the older population grew by more than 42% compared with about 21.3% for the population under 65 years of age (Figure 2), or nearly twice as fast as the as the nonelderly population.

In 2010, there were 192,589 people 65 years of age or older in Northern Virginia. That population is projected to grow to more than 326,000 by 2020 and to more than 429,000 by 2030 (Figure 2). Higher rates of growth among the older age groups means that the older population will become a significantly larger factor in, and share of, regional population increase. Between 1980 and 2000, population growth among those 65 years of age or older represented about 10% of the aggregate regional population increase. During the last decade (2000 – 2010) growth among the older population accounted for about 14% of total regional growth, a 40% increase over the previous decade.

Figure 2  
Northern Virginia Population  $\geq 65$  Years of Age  
Population and Population Change, 1980 - 2030



Source: U.S. Census 1980-2010; Virginia Employment Commission, 2020 - 2030 Population Projections

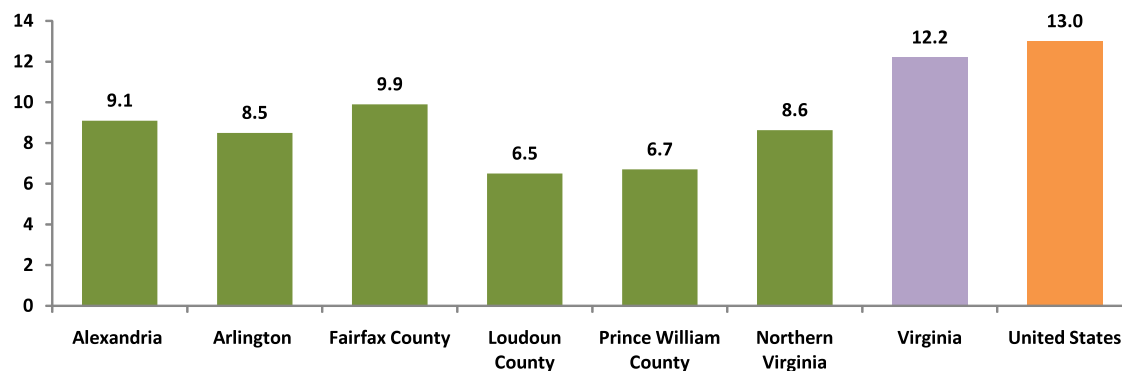
<sup>1</sup>Unless otherwise indicated, the term older population as used here refers to those 65 years of age and older.



Growth in the older population will account for a much larger share of aggregate population increase over the next two decades. Those  $\geq 65$  years of age are likely to represent more than 40% of the aggregate regional increase during the current decade (2010 – 2020) and about 34% in the next decade (2020 – 2030). In aggregate terms, the region's older population is expected to grow by approximately 134,000 during the current decade and by nearly 103,000 between 2020 and 2030. These changes will result in more than doubling the region's older population before 2030.

Though Northern Virginia's older population has been growing faster than its nonelderly population for more than three decades, and will continue to do so for at least the next 20 years, those  $\geq 65$  years of age will continue to represent a smaller share of the regional population than older population shares statewide or nationally. The percentage of the region's population 65 years of age or older grew from 5.8% in 1980 to 8.6% in 2010, an increase of 48%. The current Northern Virginia older population ratio (8.6%) remains much lower than national and Virginia ratios, 13.0% and 12.2% respectively in 2010 (Figure 3).

**Figure 3**  
**Northern Virginia Population**  
**Percent of Population  $\geq 65$  Years of Age, 2010**



Source: U.S. Census, 2010

(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

Northern Virginia's older population will grow more rapidly over the next two decades than comparable populations nationwide and statewide. For example, the Northern Virginia population  $\geq 65$  years is expected to increase from 8.6% of the regional population to about 12.8% in 2020 and about 15.1% in 2030. This represents an increase of 76% between 2010 and 2030. The U.S. population 65 years of age and older is expected to increase from 13% in 2010 to 16.1% in 2020 and to 19.3% in 2030, an increase of about 49%.<sup>3</sup> Thus, though the percentage of the regional population 65 years of age or older will remain below Virginia and national levels for many decades, the rate of change over the next two decades will be greater in Northern Virginia.

### 3. *Old Older Population*

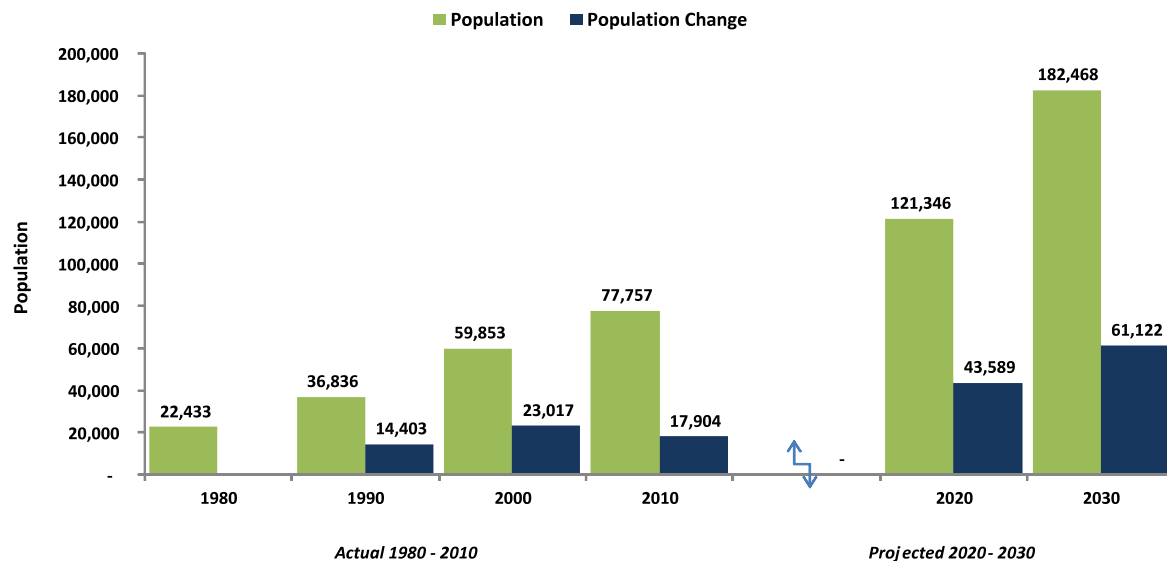
The Northern Virginia population  $\geq 75$  years has been growing rapidly for several decades. This population group grew by more than 60% in each decade between 1980 and 2000 and by about 30% between 2000 and 2010 (Figure 4). The nearly 78,000 people  $\geq 75$  years of age documented by the 2010 census are an increase of about 247% over the 1980 population.



Growth in the  $\leq 75$  years of age population is expected to exceed 50% in each of the next two decades. By 2030, there will be more than 182,000 residents 75 years of age or older, a more than 8 fold increase since 1980. This age group, about 40% of the  $\leq 65$  years of age population, typically is the most needy and dependent component of the older population.

Figure 4

**Northern Virginia Population  $\geq 75$  Years of Age  
Population Change, 1980 - 2030**



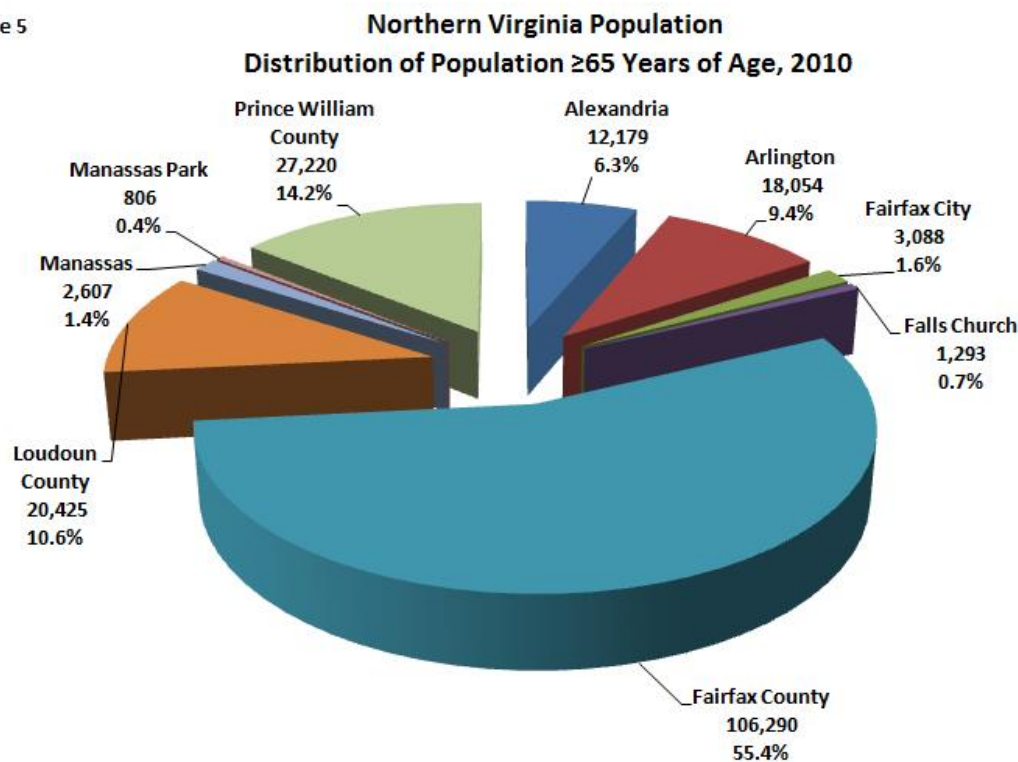
Source: U.S. Census, 1980-2010; Virginia Employment Commission, 2020 & 2030 Population Projections

#### 4. Population Distribution

There is substantial variation in the size, composition, and distribution of older populations among local jurisdictions. Local elderly populations ranged in size from 806 (Manassas Park) to 106,290 (Fairfax County) in 2010 (Figure 5). As a share of the jurisdictional population, those  $\geq 65$  years of age ranged from 6.5% of the population in Loudoun County to 9.9% of the population in Fairfax County (Figure 3). Generally, older population concentrations are higher in the eastern half of the region than in the western half. Older population ratios (percentages) are between 30% and 50% higher in Alexandria, Arlington, and Fairfax County than in Loudoun and Prince William Counties.



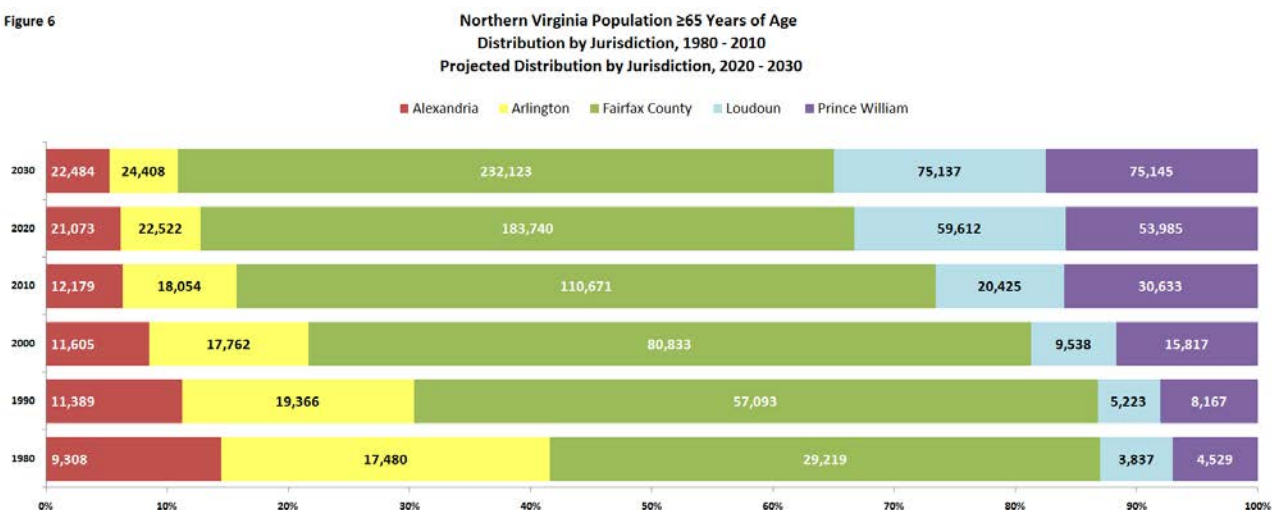
Figure 5



Source: U.S. Census Bureau, 2010

More than half of the region's older population lives in Fairfax County. Though the percentage will decrease somewhat, as the number of elderly residents grows in other jurisdictions, Fairfax County is expected to continue to have more than half of the region's older population in 2020 (54%) and 2030 (52%). There will be a gradual shift of the older population westward (outward) to Loudoun and Prince William Counties over the next two decades. This pattern is likely to continue for several decades (Figure 6).

Figure 6

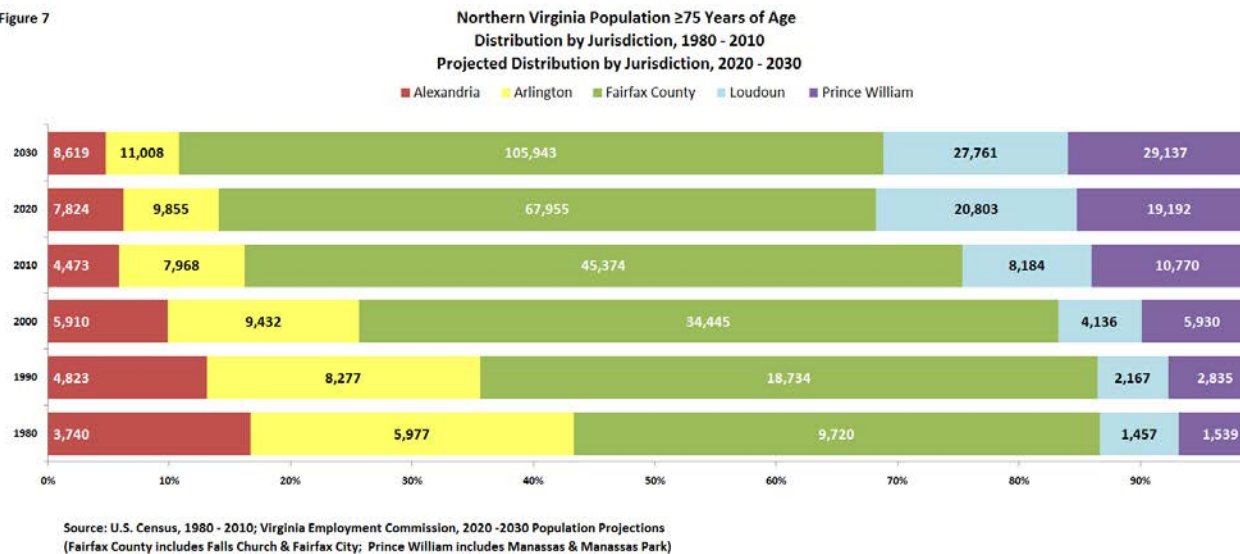


Source: U.S. Census, 1980 - 2010; Virginia Employment Commission, 2020 - 2030 Population Projections  
(Fairfax County includes Falls Church & Fairfax City; Prince William includes Manassas & Manassas Park)



All jurisdictions will see significant growth in their older populations over the next two decades (Figures 6 & 7). Increases are projected to range from 1,069 in Manassas Park to 115,642 in Fairfax County. Percentage changes range from about 35% in Arlington to about 268% in Loudoun County. The projected region wide growth of 237,000 represents an increase of 123% between 2010 and 2030.

Figure 7



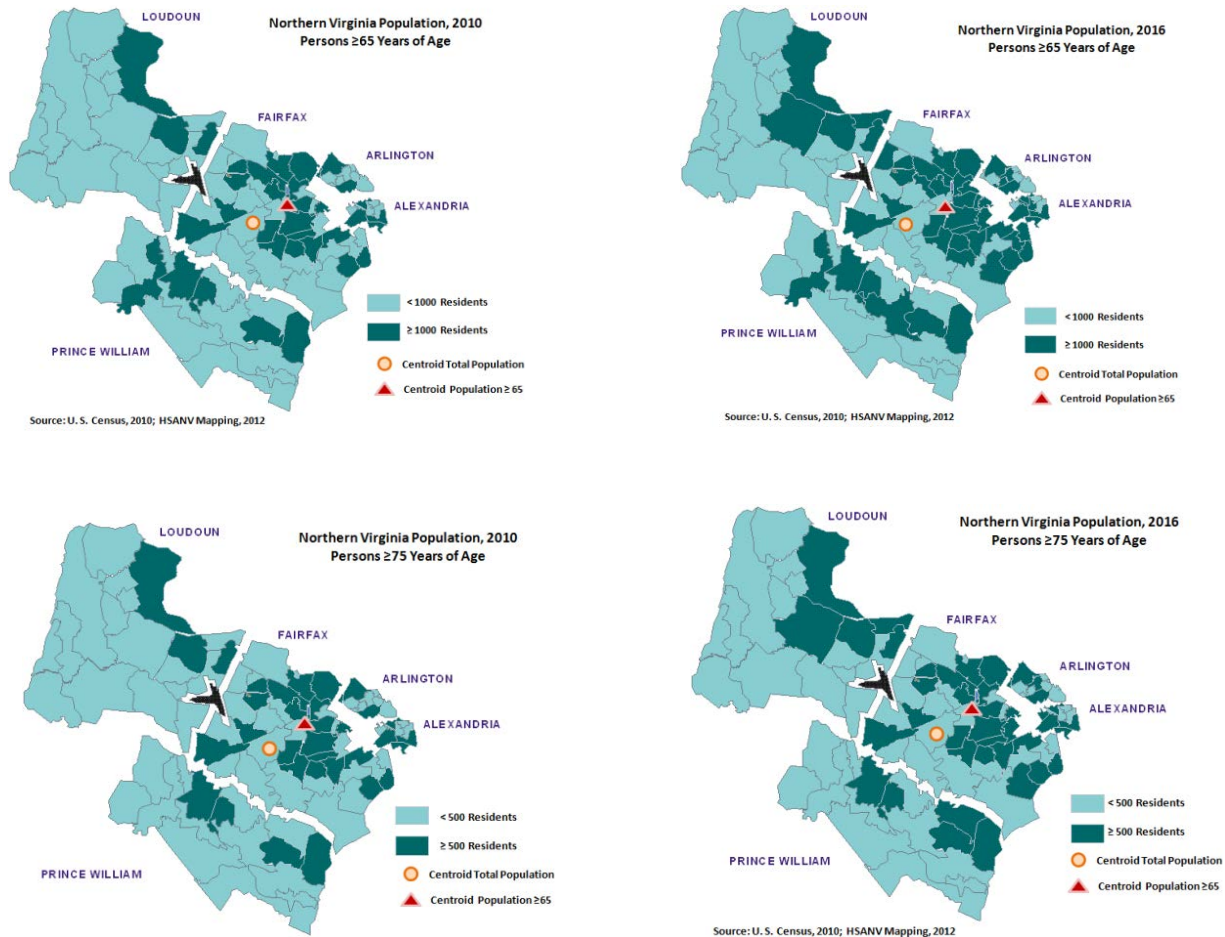
About half (49%) of the projected growth in the older population is expected in Fairfax County, and most of the rest will be in Loudoun County (23%) Prince William County (17%). Whether expressed in the absolute numbers, or as a percentage increase, growth in the older population will be substantial throughout the region.

Map 2 depicts the distribution of the region's older population in 2010 and the projected distribution in 2016. Though there are significant numbers of older residents in all of the region's 92 populated zip code areas, those ≥65 years of age are located disproportionately in Arlington and Alexandria communities bordering Fairfax County, in central and northeast Fairfax County communities near the Capital Beltway and the Mount Vernon area, in the Woodbridge and Manassas/Manassas Park areas of Prince William County, and in northeastern Loudoun County. A similar pattern exists for those ≥75 years of age, indicating that most of the older population remains in their home communities over the decade.

Most of the projected increase in the older population by 2016 is expected to be within the areas that now have large numbers of older persons and in communities neighboring those with concentrations of elderly residents in 2010. Reflecting this distribution, the weighted centers of the region's older populations, those ≥65 years of age and those ≥75 years of age, is expected to remain north and east of the center of the overall regional population (Map 2).



**Map 2: Northern Virginia Older Population Distribution**



## 5. Gender

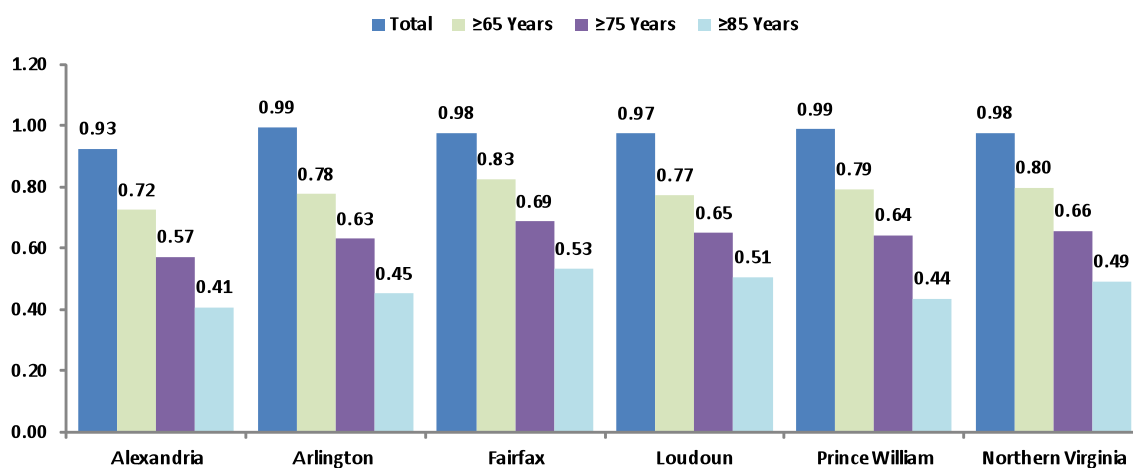
Gender ratios change significantly and predictably as a population ages. Absent imposed constraints, the number of male infants normally exceeds the number of female infants by about 5%.<sup>4</sup> Higher male disease, disability, and death rates inexorably reduce the number of males to the point that by old age the ratio of males to females in a community often is less than 50%.<sup>5</sup>

Until very old age, males die on average at younger ages than females. Females  $\leq 65$ -year of age have a life expectancy of nearly 19 years (18.9 years); males about 15.5 years. Females surviving to 75 years, on average, are likely to live another 12.6 years, to about 87.6 years. Males die earlier than females at nearly all ages, but the difference shrinks with advancing age. Males  $\leq 75$  years can expect to live, on average, another 10.5 years, to about 85.5 years. These variations in mortality mean that the older population becomes increasingly female at all older age intervals.



This pattern is evident in Northern Virginia. In 2010, the male to female ratio for the regional population was about 98 (97.6) males per 100 females (Figure 8). By contrast the ratio for the population 65 years of age and older was more than 18% lower at about 80 males per 100 females. With substantially higher death rates among males between 65 and 74 years of age, the ratio of males to females in Northern Virginia fell to about 66 to 100 for those over 75 years of age and to about 49 males per 100 females among those  $\geq 85$  years of age.

**Figure 8** Northern Virginia Gender Ratios Population, 2010  
Ratio of Males to Females by Jurisdiction and Age Group, 2010



Source: U. S. Census, 2010; HSNV Calculations, 2012

The gender distribution of the older population over the next two decades will be similar to that of 2010. The overall ratio of males to females is likely to be between 97 and 98 males per 100 females. The older population will continue to be disproportionately female.

Between 55% and 60% of the 2020 and 2030 regional populations  $\geq 65$  years of age will be female. The female percentage will be between 60% and 65% for those  $\geq 75$  years of age. Slightly more than two-thirds of those 85 years of age and older will be female.

This general pattern is not likely to vary significantly within the region. Because of the current distribution of the older population, the ratio of males to females is likely to continue to be lower in Alexandria and higher in Fairfax County than elsewhere in the region.

## 6. Race and Ethnicity

Population growth often results in greater racial and ethnic diversity. During the last three decades (1980 – 2010) racial and ethnic minority populations in Northern Virginia grew more rapidly than the majority White population. During this period the three principal racial and ethnic minorities in the region (Asian, Black, Hispanic) grew at rates that were several times that of the White population. Consequently, these groups increased as a percentage of the regional population during each of the last three decades.



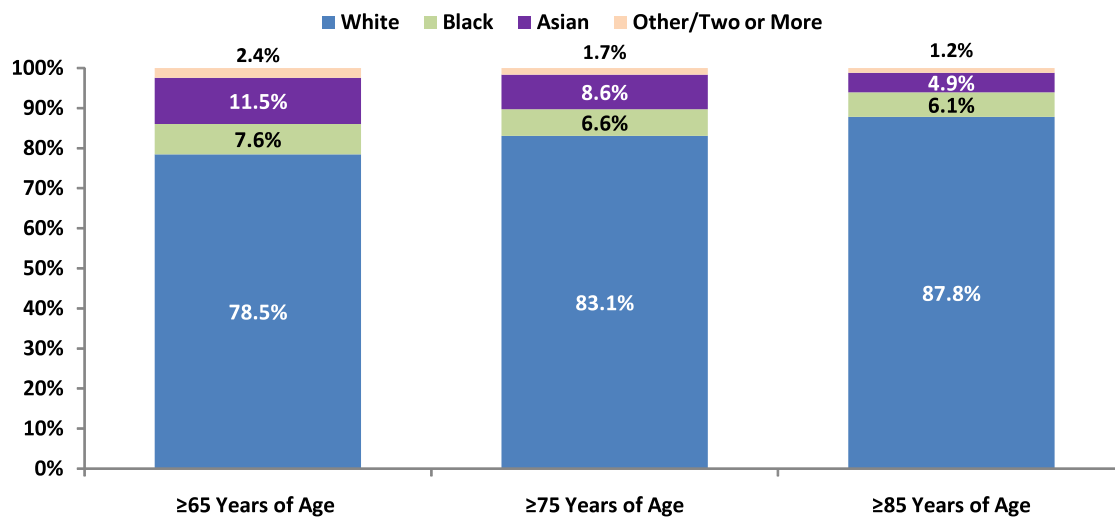
Rapid population growth has brought greater racial and ethnic diversity to Northern Virginia. In 1980, the regional population was 86.7% White and 6.8% Black. Members of all other racial and ethnic groups (principally Asian and Hispanic) accounted for only 5.5% of the population. Twenty years later (2000), after adding more than 709,000 persons, the population was 70.3% White, 11.1% Black, and 18.6% “other”. During that 20-year period, the White population grew by 33%, the Black population by 128%, and the Hispanic population by 457%. This pattern continued during the last decade and remains in place.

All three major minority racial and ethnic populations (Black, Asian, Hispanic) increased substantially between 2000 and 2010. By 2010, the majority White population decreased to about 64% of the regional total. Hispanics (all races) are now the largest ethnic minority at more than 16% of the population, followed by Asians (13.5%) and Blacks (11.7%).

Compared with the overall population, Northern Virginia’s older population is skewed strongly toward the majority White population. Over the five year period between 2006 and 2010, about 79% of those  $\geq 65$  years of age were White (Figure 9). The White percentage increased to 83% for those  $\geq 75$  years of age and to about 88% for those  $\geq 85$  years of age<sup>6</sup> (Figure 9).

Figure 9

Northern Virginia Population  $\geq 65$  Years of Age  
Distribution by Age Group and Race, 2010



Source: 2006-2010 American Community Survey 5-Year Estimates, 2012

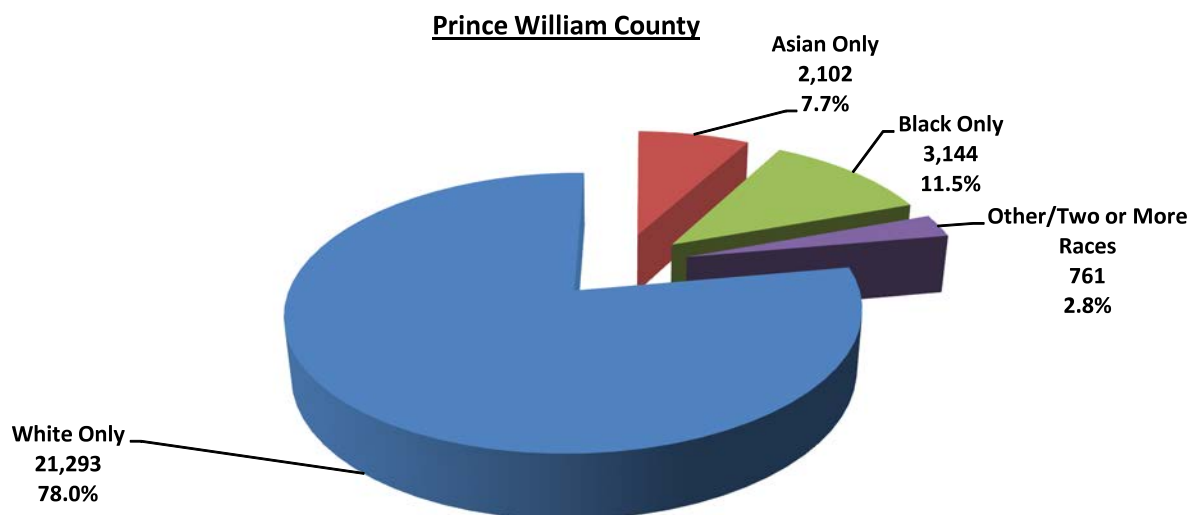
Composition differences in the overall population and the older population in Prince William County illustrate the pattern that holds region wide. Less than 60% of the 2010 county population (including Manassas and Manassas Park) was White. By contrast, about 78% of the County population 65 years of age and older was White (Figure 10).



This general pattern holds region wide (in all jurisdictions) and increases with age. The differential is consistently higher among those  $\geq 75$  years of age and those  $\geq 85$  years of age in Prince William County and all other local jurisdictions.

Figure 10

**Northern Virginia Population  $\geq 65$  Years of Age  
Distribution by Jurisdiction and Race, 2010**



Source: 2006-2010 American Community Survey 5-Year Estimates  
(Prince William County includes Manassas & Manassas Park)

Minority populations are present in substantial numbers in all jurisdictions, but they are disproportionately located in communities along the Route 1 corridor in the eastern part of the region, in the greater Manassas/Manassas Park area, in the Herndon-Sterling area of western Fairfax and eastern Loudoun counties.

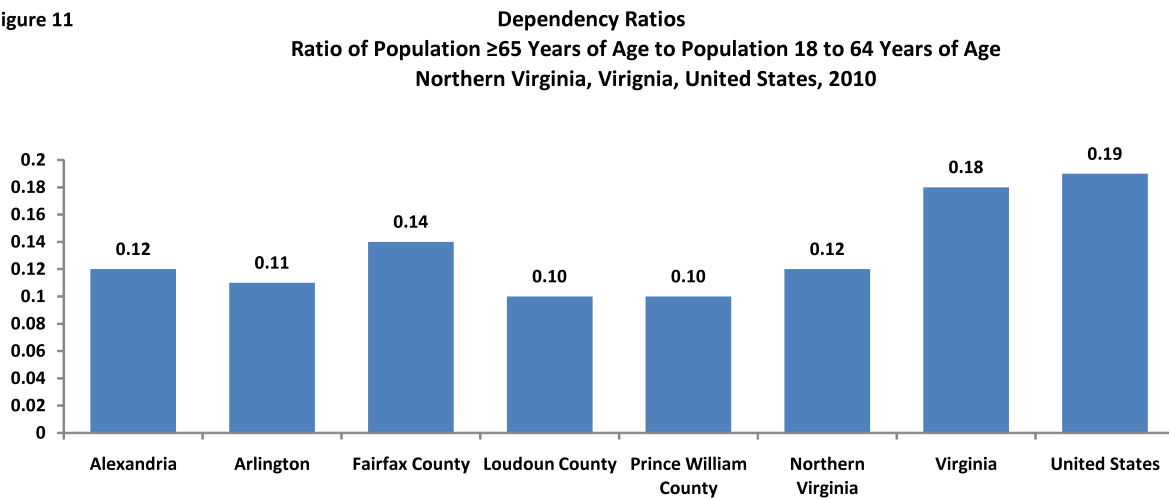
## 7. *Elderly Dependency Ratio*

Dependency ratios are a measure of the number of non-working age persons relative to the number of working age persons in that population.<sup>7</sup> In these calculations, nonworking age populations are defined as those less than 15 years of age and those  $\geq 65$  years of age. The underlying assumption is that these populations are likely to be substantially dependent, directly or indirectly, on working age adults for social and economic support. A high or rising ratio is of concern because it indicates that the economic burden of supporting dependent populations is increasing and will be spread over a smaller working age population. Conversely, low ratios usually indicate that resources are more likely to be available to meet social needs.



Northern Virginia dependency ratios—total and component—are lower than those found statewide and nationally. This results largely from the comparatively smaller regional elderly population (Figure 11). The Northern Virginia elderly dependency ratio will increase faster than the Virginia and U.S. ratios over the next two decades and beyond. Between one-third and one half of the difference between the Northern Virginia and the statewide and national ratios will be erased over the next two decades.

Figure 11



Source: U.S. Census Bureau, 2010; HSNV calculations, 2012

There is some intraregional variation in the elderly dependency ratio, with a somewhat higher ratio in Fairfax County (including Fairfax City and Falls Church) and Alexandria and lower ratios in Prince William County (including Manassas and Manassas Park) and Loudoun County (Figure 11).



## Section III

### Economic & Social Circumstances

Economic stability and security are basic personal concerns. This is especially true for the elderly. Reduced earning power and the associated fear of exhausting assets, falling into poverty, and becoming dependent on others are everyday possibilities for many older Americans.

Economic insecurity rose markedly with the recession of 2008, but the underlying problems and related anxiety have been on the rise for much of the last decade.<sup>8</sup> As measured by financial stability and security indices economic insecurity among older households increased by about one-third, from 27% to 36%, between 2004 and 2008.<sup>9</sup>

Beyond the 36% of the older population thought to be financially insecure, the indices suggest that another 40% of the population  $\geq 65$  years of age are “financially vulnerable”. This larger segment of the older population, neither secure nor insecure as measured by standard indices, has little ability to handle economically an unexpected major illness or other destabilizing personal, family, or household event.

Rising economic insecurity among the older population appears to be driven largely by three factors: insufficient income, declining assets, and rising housing costs

#### ***1. Income Levels and Distribution***

By most measures, Northern Virginia is affluent. Though personal and household incomes vary considerably within the region, average (and median) yearly incomes in all local jurisdictions are higher than state and national levels (Figure 12).<sup>10</sup> Over the last five years, average household income was above \$100,000 in all major local jurisdictions, ranging from about \$102,300 in Prince William County to nearly \$130,500 in Loudoun County.<sup>11</sup>

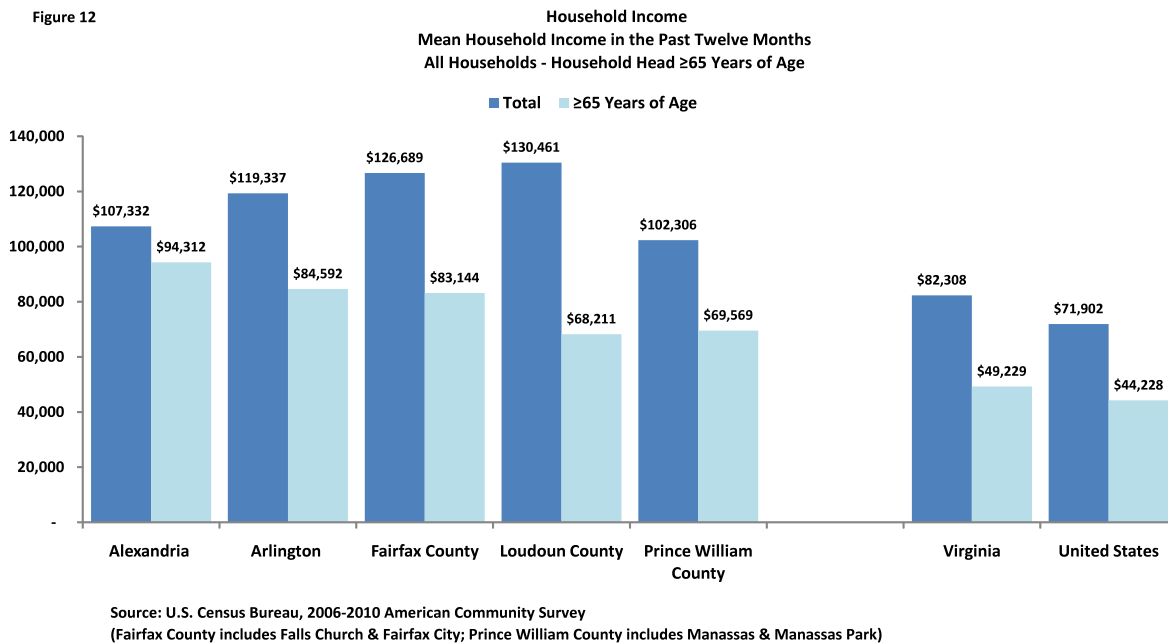
Average yearly household income in Northern Virginia jurisdictions ranged from 25% to 60% higher than average household income statewide and from 37% to 70% higher than household income levels nationally.<sup>12</sup>

Household income drops substantially among those 65 years of age and older (Figure 12). Over the last five years (2006 – 2010) the average ranged between about \$68,200 in Loudoun County to about \$94,300 in Alexandria. This compares with averages of about \$49,200 in Virginia statewide and about \$44,200 nationwide.

Regional average household income distribution patterns for those  $\geq 65$  years of age differ from those for the younger adult population. Loudoun County, which has the region’s highest average household income, has the lowest average household income for those  $\geq 65$  years of age. Conversely, Alexandria, which has the second lowest average household income, has the highest average household income among its older residents (Figure 12).



Nationally and statewide income in households headed by persons 65 years of age and older is about 40% lower than the average for the total population.



The reduction in average household income for those  $\geq 65$  years of age, compared with the total population, is substantially less in most Northern Virginia localities. Only Loudoun County has a reduction greater than that seen statewide and nationally. The difference reported in Alexandria is substantially less than differences in other local jurisdictions, and state and national differences, whereas the difference in Loudoun County is higher than in other local jurisdictions and than in state and national differences.

## 2. Employment

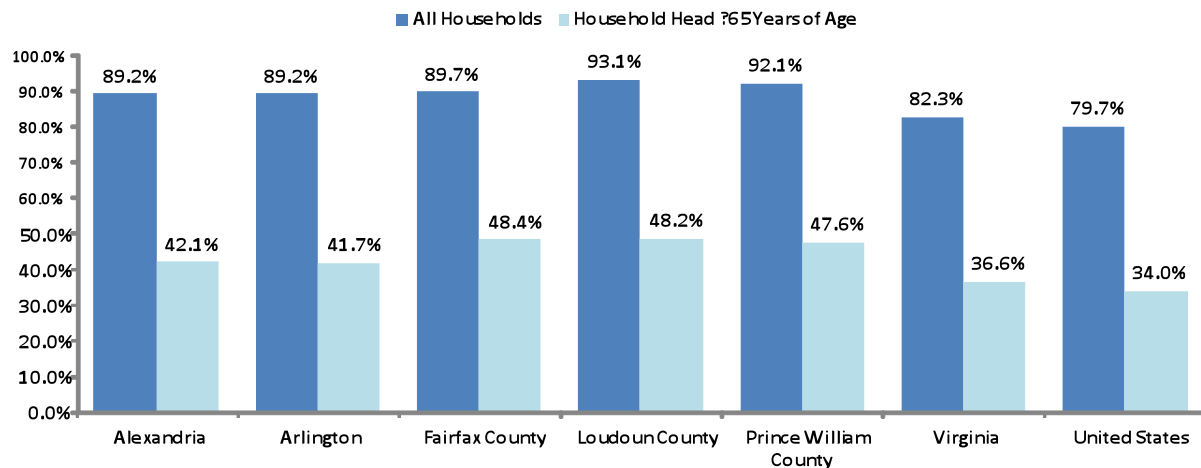
High average and median household incomes in Northern Virginia are partly a function of high employment rates. A larger percentage of the region's adult population is in the workforce and has earned income than statewide and nationally. This pattern holds for all households and those headed by persons 65 years of age and older. More than 90% of Northern Virginia households are headed by a person reporting earned income. This is between 10% and 13% higher than state and national levels. For older households, those headed by a person  $\geq 65$  years of age, about 46% reported earned income compared with about 36% statewide and 34% nationally (Figure 13).

The difference between Northern Virginia households headed by older persons reporting earned income compared with similar households statewide and nationally is greater than the difference reported for all households. The percentage of older Northern Virginia households reporting earned income was about 26% higher than statewide and about 36% higher than nationwide.



Figure 13

**Northern Virginia Household Income**  
**Percent of Households with Earnings in Last Twelve Months**



Source: U.S. Census Bureau, 2006-2010 American Community Survey

The number and percentage of households reporting earned income varies within the region, with Loudoun County, Fairfax County and Prince William County consistently reporting higher percentages of households with earned income than Arlington and Alexandria. The intraregional differences are greater among households headed by older persons than among households generally. About 42% of older households in Alexandria and Arlington reported earned income compared with about 48% in Fairfax County, Loudoun County and Prince William County. A much higher percentage of households in Northern Virginia have earnings than nationally and statewide. More than 90% of Northern Virginia households report earned income compared with about 82% in Virginia statewide and about 80% nationally. In addition to a larger percentage of the adult population in the workforce, household incomes in all local jurisdictions have been, and remain, significantly higher than statewide and nationally.

### 3. Gender, Age, Household Composition

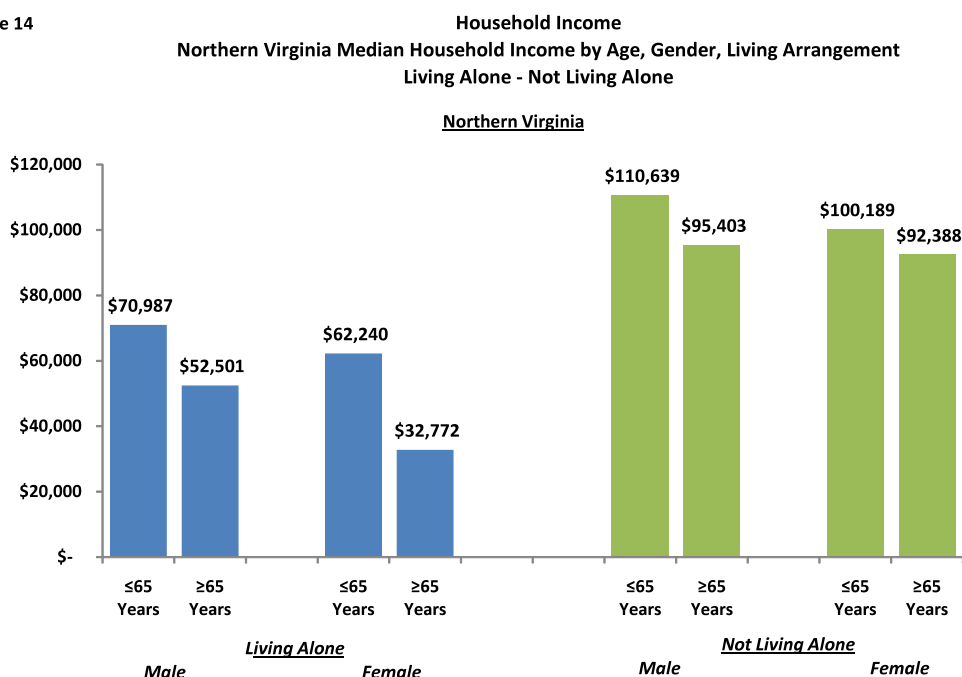
Beyond age, household income varies greatly by gender and living arrangement. Most single member households (those living alone) have lower income than households with two or more members. Households headed by females, whether single or multiple member, have lower average and median incomes than male headed households.

This pattern prevails in Northern Virginia, within the population generally and among households headed by older persons. Median household income is higher in multiple member households than in single member households, higher for male headed households in all living arrangements and age groups, and lower in households headed by a person  $\geq 65$  years of age in all living arrangements (Figure 14).



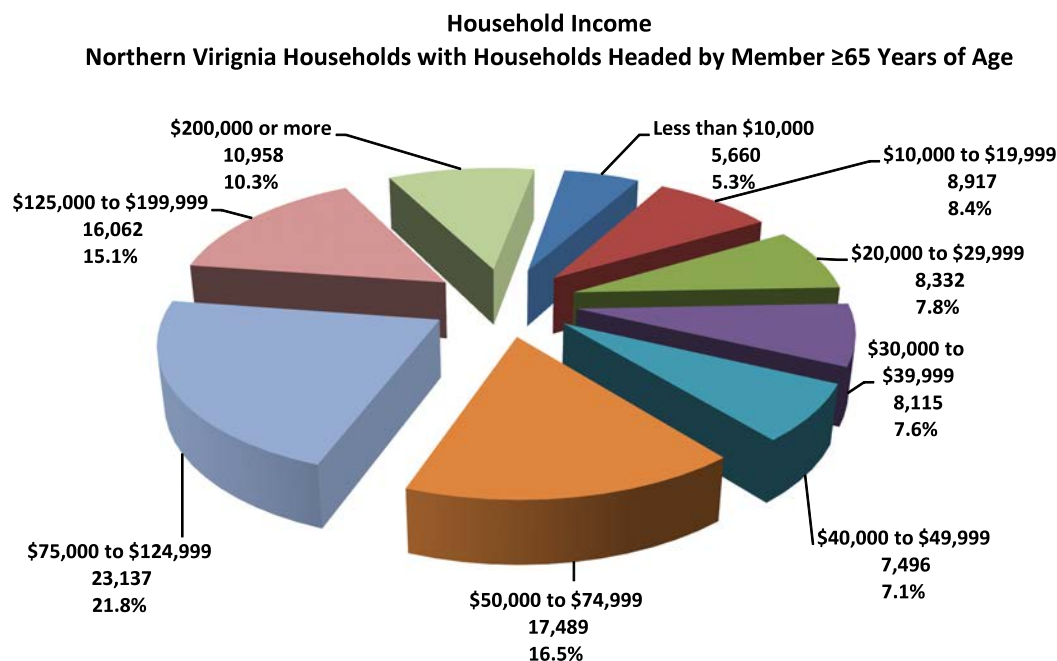
The highest median income level is among multiple member households headed by a male under 65 years of age. The lowest income level is among single member households headed by a female 65 years of age or older. The median household income of a single member household headed by a female  $\geq 65$  years of age was only about 30% of that of a multiple member household headed by a male under 65 years of age (Figure 14).

Figure 14



Source: U.S. Census Bureau, 2006 - 2010 American Community Survey

Figure 15



Source: U. S. Census Bureau, 2008 - 2010 American Community Survey.



#### 4. *Income Distribution: Older Households*

Average and median income in households headed by a person 65 years of age or older varies widely within Northern Virginia, from an average of about \$68,000 in Loudoun County to more than \$94,000 in Alexandria (Figure 12). As with the population generally, there is wide variation in income among older households. About 25% of households have annual income of \$125,000 or more. Nearly half (46%) of older Northern Virginia households report income of at least \$75,000, which is higher than the national average for all households (about \$72,000).

Though more than half of older households in Northern Virginia report annual income of at least \$50,000, more than 20% of have income of less than \$30,000 a year. Of these households, nearly 6,000 have income of less than \$10,000 annually (Figure 15).

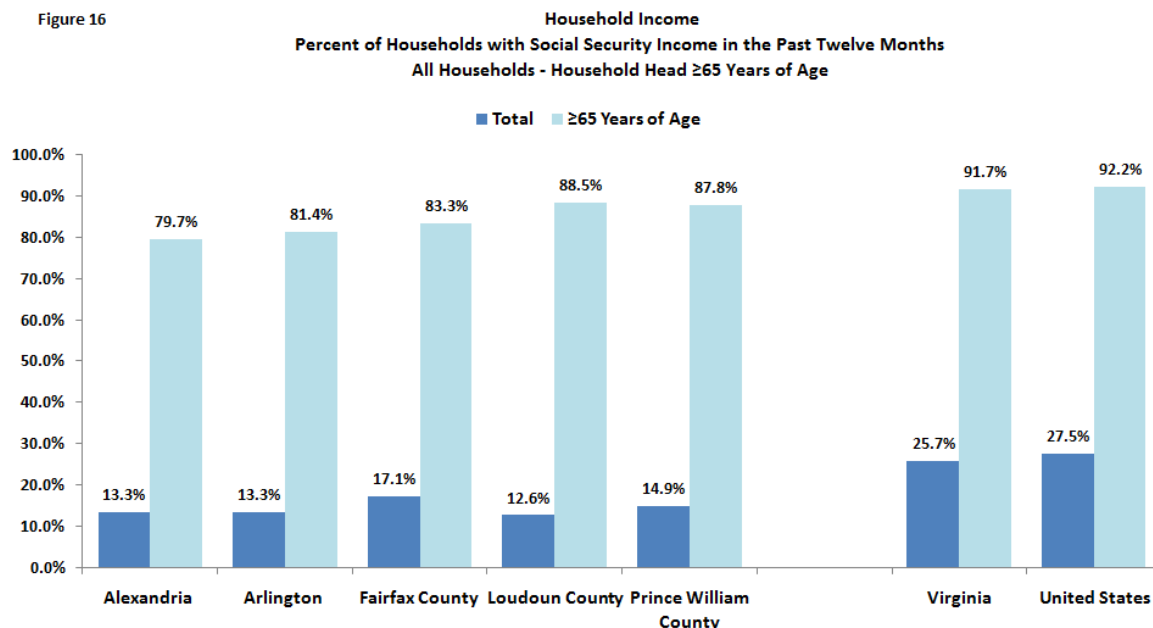
Income distribution patterns suggest that between 15,000 and 20,000 older households are likely to have difficulty meeting routine expenses of daily living. This number is likely to more than double by 2030.

#### 5. *Social Security Income*

Social security is a major source of income for disabled persons of all ages and of retirement income for most of those  $\leq 65$  years of age.<sup>13</sup>

A notably smaller percentage of Northern Virginia households have social security income than statewide or nationally. A somewhat higher percentage of households in Fairfax County received social security benefits income than elsewhere in the region (Figure 16).

Figure 16

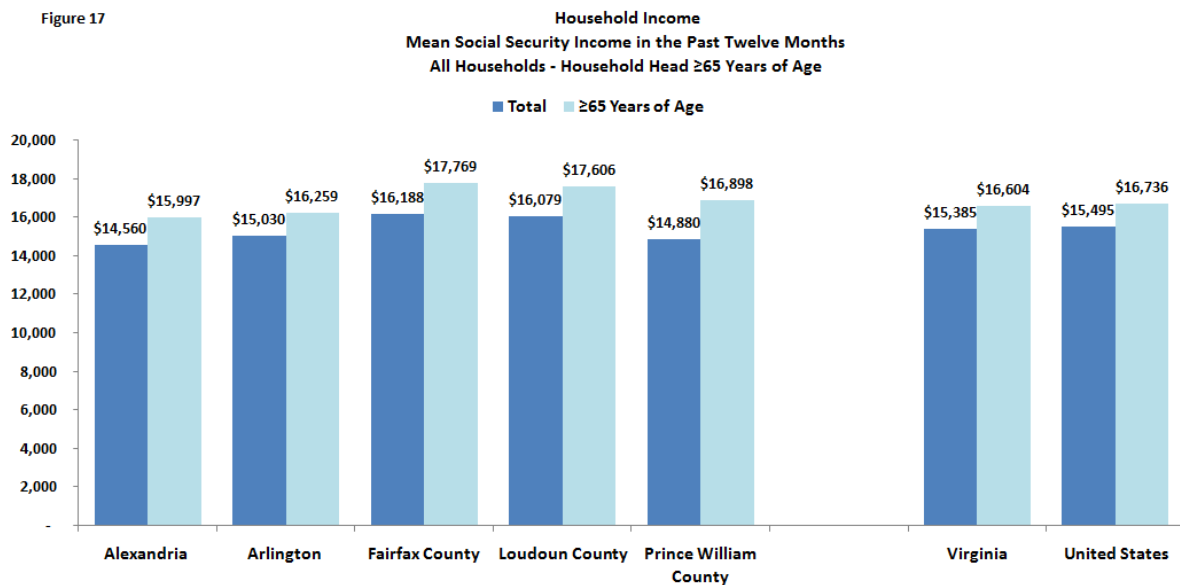


Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)



Among older households, the percentage is much lower throughout the region than statewide or nationally. These data are consistent with, and appear to reflect, the higher percentage of the older Northern Virginia population in gainful employment and a higher percentage of immigrants not qualified to receive social security payments.

Figure 17



Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

Though the percentage of the population, elderly and otherwise, qualifying for social security benefits in Northern Virginia is lower than statewide and nationally, the payment per recipient, which is based on taxable lifetime earnings and the age at which benefits are claimed, is higher than in most other communities (Figure 17).

## 6. Poverty and Low Income

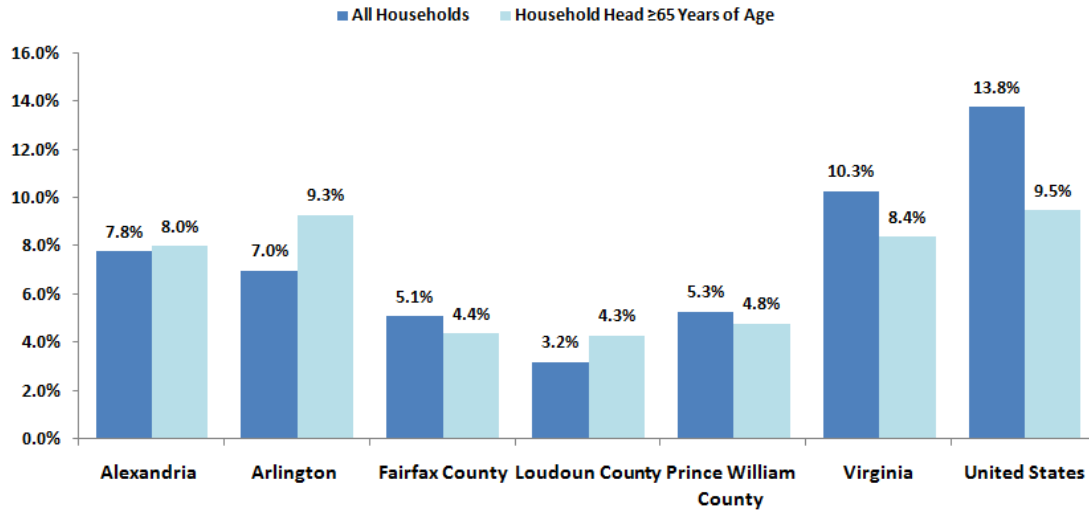
In most communities families need an income of about twice the federal poverty level, or about \$30,260 for a family of two in 2012, to cover basic necessities. Using this measure, more than 20% of older households in Northern Virginia are “low income,” or near poor, households.<sup>14</sup>

Nationally and statewide the poverty rate among those  $\geq 65$  years of age is significantly lower than among the population generally (Figure 18). That pattern does not hold in Northern Virginia. Though the regional poverty rate is lower than the national and Virginia rates, over the last five years (2006 - 2010) the poverty rate among the older population in Northern Virginia has been comparable to, or higher than, the rate in the nonelderly population.



Figure 18

**Northern Virginia Household Income**  
Percent of Households Below 100 % of the Poverty Level in the Past Twelve Months

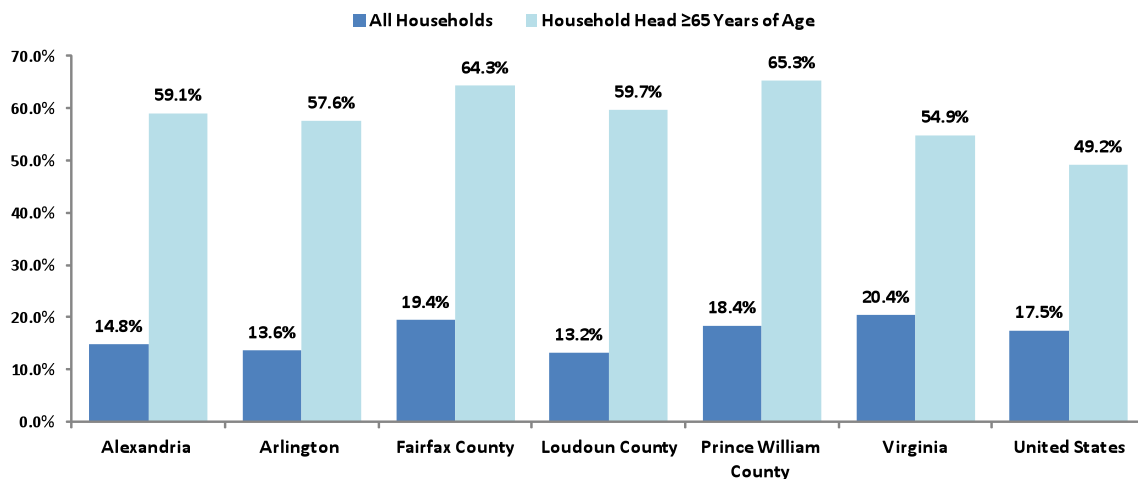


Source: U.S. Census Bureau, 2006-2010 American Community Survey

The number and percent of households with incomes below the poverty level varies widely within the region. Between 2006 and 2010, households with incomes below the poverty level ranged from an estimated 3.2% in Loudoun County to 9.3% in Arlington. In most local jurisdictions, the percent of older households with poverty level income was markedly less than the national (9.5%) and Virginia (8.4%) levels. Nevertheless, tens of thousands of older Northern Virginians live in poverty, or near poverty, with the attendant implications and consequences.

Figure 19

**Northern Virginia Retirement Income**  
Percent of Households with Retirement Income in the Past Twelve Months



Source: U.S. Census Bureau, 2006-2010 American Community Survey, 2012



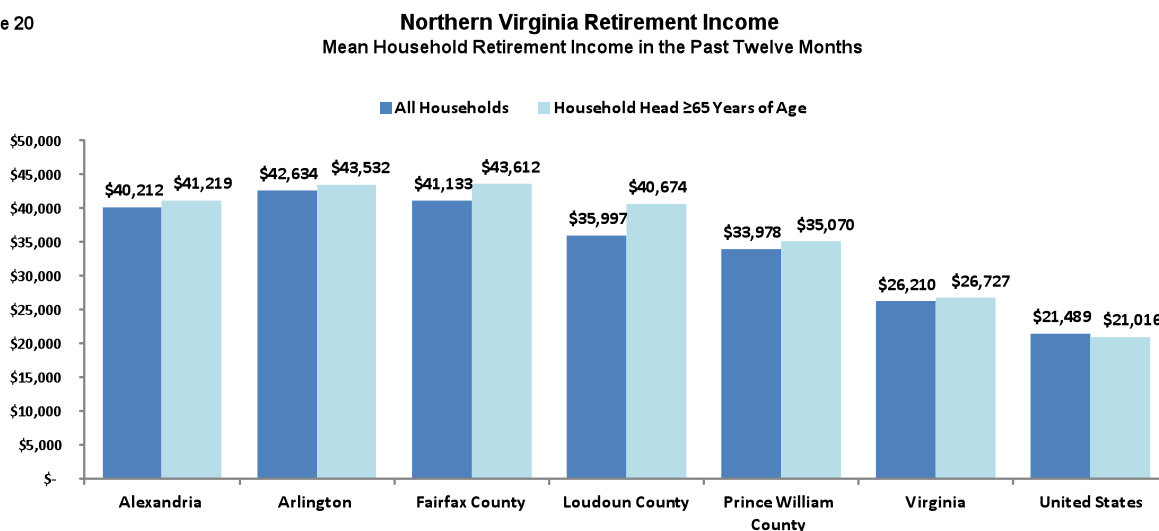
## 7. Retirement Income

A relatively large percentage of older households in Northern Virginia have retirement income. About half of older households nationwide, and about 55% of Virginia's older households, reported retirement income between 2006 and 2010. All Northern Virginia jurisdictions have a higher percentage of older households with retirement income (Figure 19). The percentage of older households with retirement income ranged from 58% in Arlington to more than 65% in Prince William County.

In addition to a larger percentage of older households with retirement income, average (and median) household retirement income is notably higher than elsewhere in Virginia and nationwide.

Over the last five years, average annual retirement income ranged from about \$35,000 in Prince William County to nearly \$44,000 in Fairfax County. Average annual retirement income in

Figure 20



Source: U.S. Census Bureau, 2006–2010 American Community Survey, 2012

Northern Virginia is nearly twice the national average and more than 50% higher than the Virginia average (Figure 20).

## 8. Food Stamp Participation

Enrollment in the food stamp program is relatively low in Northern Virginia. Region wide about 2.9% of households received food stamps between 2008 and 2010 (Figure 21). The level of participation is less than half the state level (6.1%) and less than one-third the national level (7.9%).<sup>15</sup>

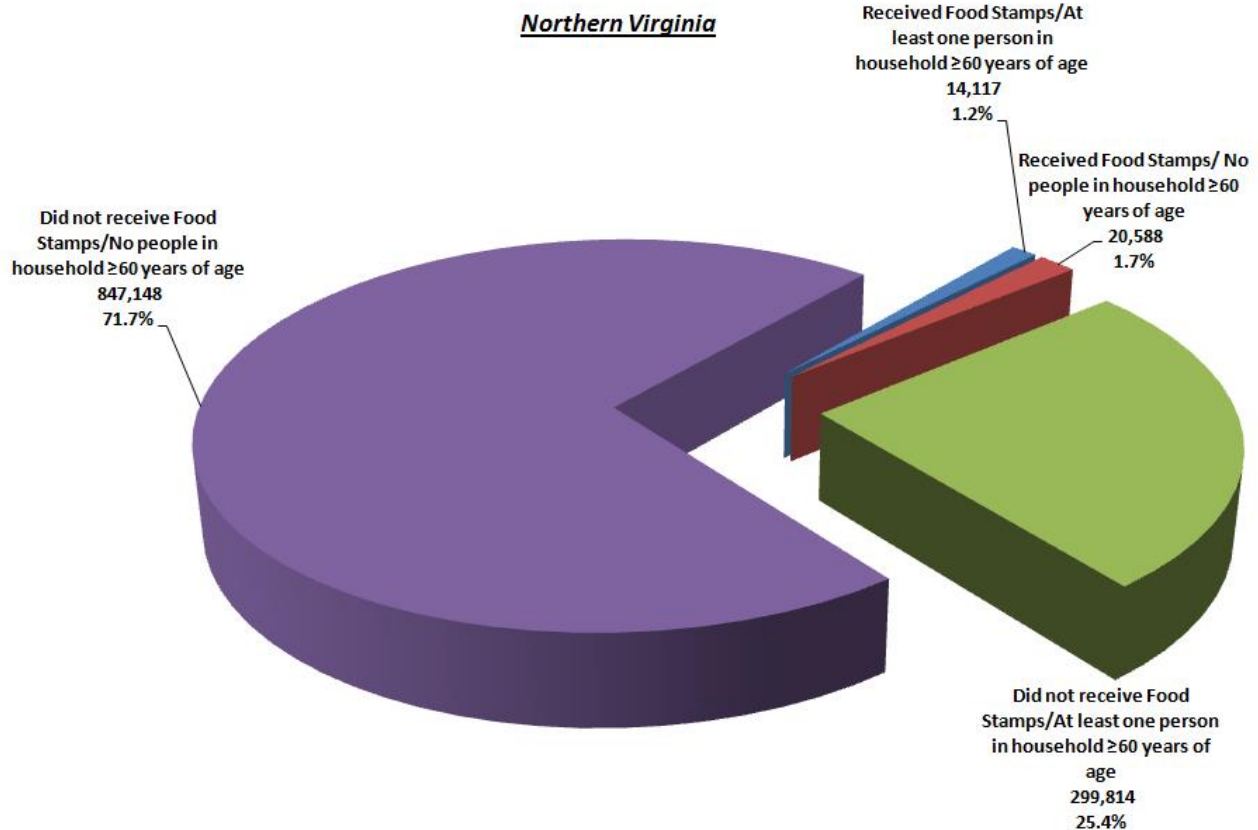
Participation in the food stamp program by Northern Virginia households and families with poverty level incomes is comparatively low, lower in most localities than state and national levels. A



number of low income households that qualify to receive food stamps do not obtain them. Reasons underlying relatively low participation rates are not well understood.

**Figure 21**

**Northern Virginia Food Stamp Recipients  
Households with Members  $\geq 60$  Years of Age**



Source: U. S. Census Bureau, 2008 - 2010 American Community Survey.

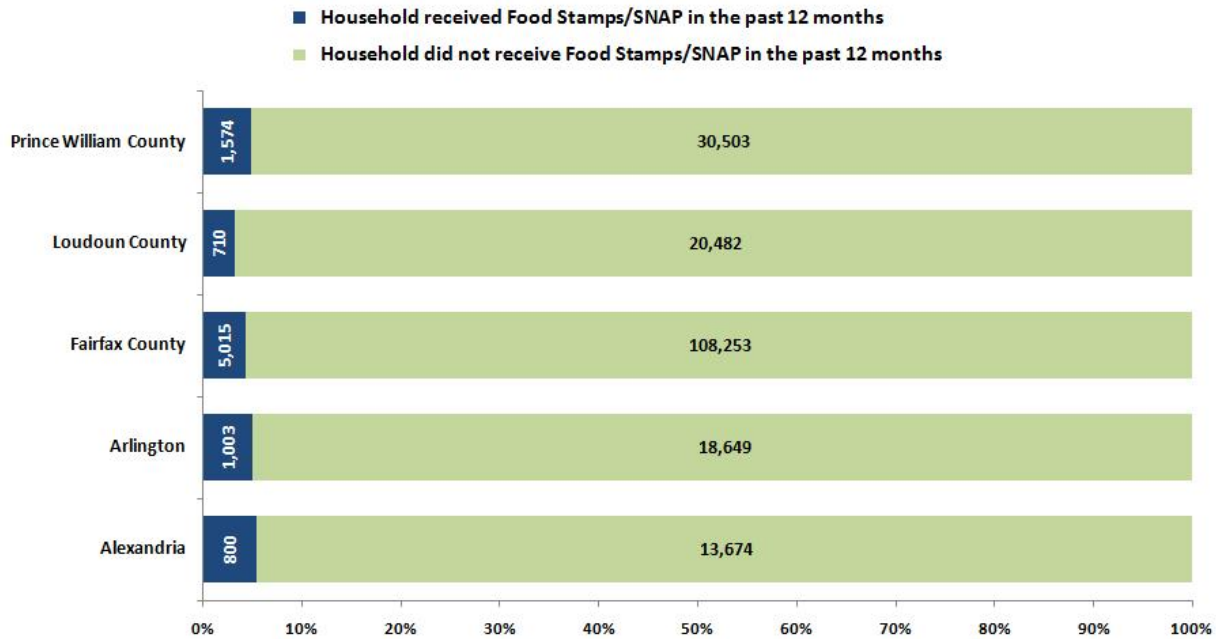
Food stamps are an important form of economic and social assistance for low income persons and families. The low food stamp program participation level may be related to the region's large number of immigrant families and to the associated high levels of linguistic isolation.

Regionwide about 1.2% of households with older members (here defined as a person 60 years of age or older) received food stamps (Figure 21). With the exception of the unusually low rate in Loudoun County (0.7%), the older household food stamp participation rate does not vary significantly among local jurisdictions (Figure 22).



**Figure 22**

**Northern Virginia Food Stamp Recipients  
Households with Members ≥60 Years of Age**



Source: U. S. Census Bureau, 2008 - 2010 American Community Survey.

The majority of households with elderly members receiving food stamps are in Fairfax County (Exhibit 22).

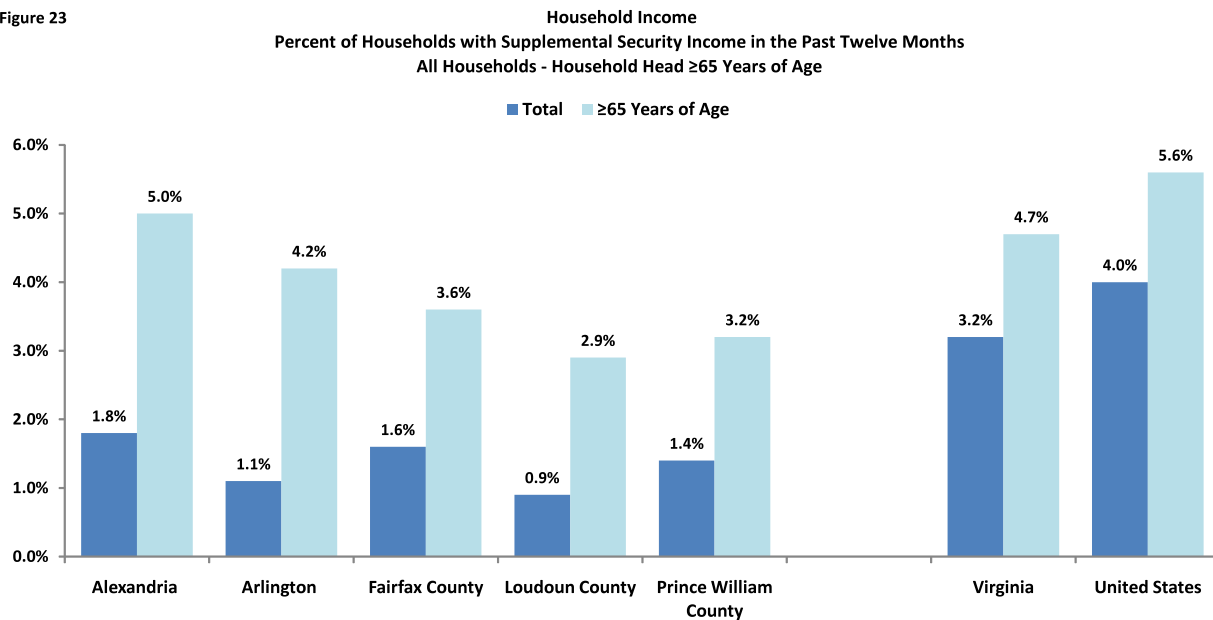
## 9. Supplemental Security Income (SSI)

Supplemental security income (SSI) is a federal income support program available to qualifying low income individuals and families. It provides small payments to the aged, blind and disabled persons with little or no income. SSI is intended to help recipients meet basic needs, to defray food, shelter and clothing expenses.

About 1.5% of the Northern Virginia population receives supplemental security income. A much larger percentage, between 3.5% and 4.0%, of the older population qualifies for and receive SSI support. Jurisdictional percentages range from about 2.9% in Loudoun County to about 5.0% in Alexandria (Figure 23).



Figure 23

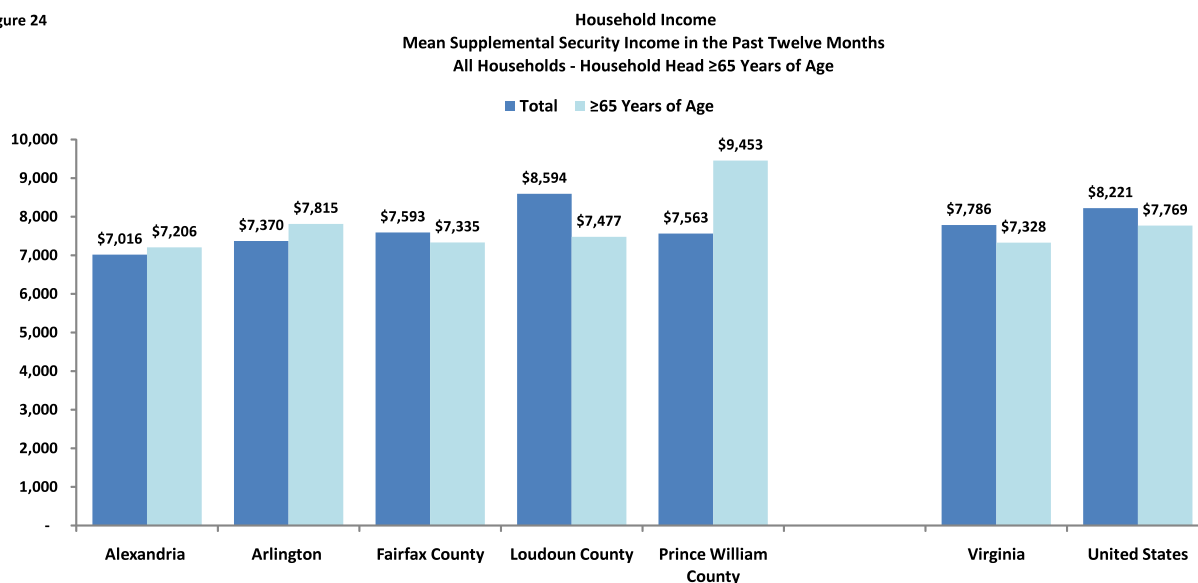


Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

All local jurisdictional SSI participation levels are lower than the national level (5.0%) and all except Alexandria are lower than Virginia's statewide rate (4.7%).

SSI payments are modest. Average annual payments over the last five years (2006 – 2010) ranged from about \$7,200 in Alexandria to about \$9,500 in Prince William County (Figure 24).

Figure 24



Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

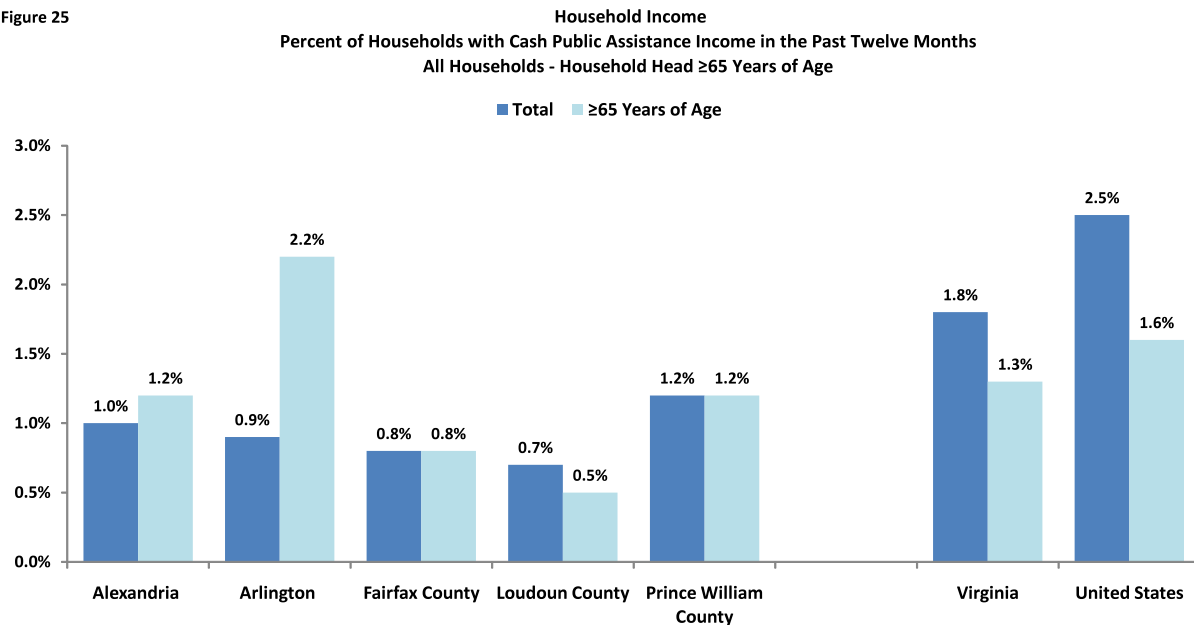


With the exception of the relatively high average payment to older Prince William County residents, average annual SSI payments in Northern Virginia do not differ significantly from payments elsewhere in Virginia and nationwide (Figure 24). Though modest, supplemental security income payments are critical to the region's poorest of the poor older residents who are able to qualify for the assistance.

### 10. Public Assistance (Cash)

Cash public assistance refers to all cash public support, including supplemental security income for qualifying persons and families. In addition to SSI, these payments may include temporary assistance to needy families (TANF), general welfare payments, and temporary emergency assistance of various kinds.

Figure 25



Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

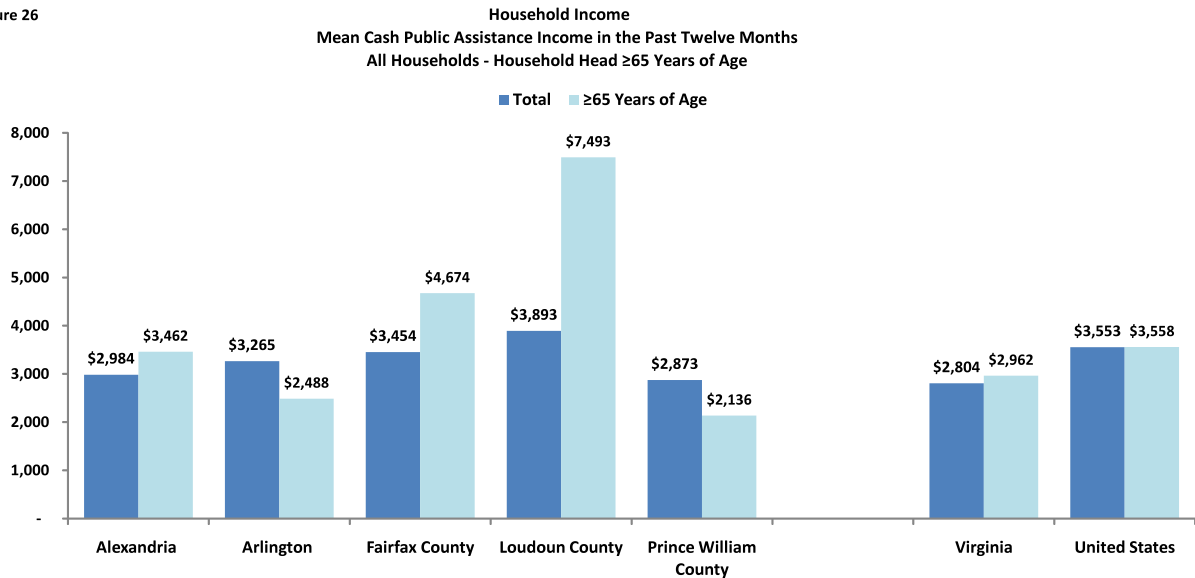
Excluding supplemental security income, about 1.0% of older households in Northern Virginia received cash assistance payments between 2006 and 2010 (Figure 25). The percentage of the older population receiving cash payments was marginally less than the percentage statewide (1.3%) and nationwide (1.6%).

Between 2006 and 2010 the average annual value of cash assistance (in addition to SSI payments) to older households in Virginia was between \$2,800 and \$3,000 annually.

Payments in Northern Virginia were substantially higher, ranging from about \$2,500 in Arlington to nearly \$7,400 in Loudoun County (Figure 26).



Figure 26

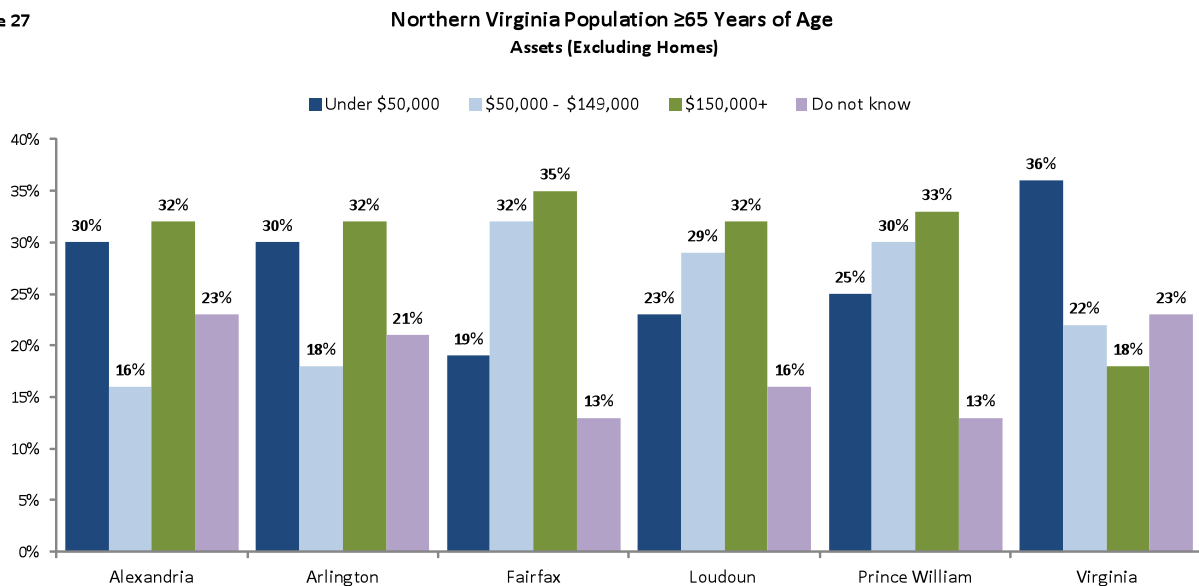


Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

## 11. Assets

Excluding the value of homes most Northern Virginia households with older members have assets of less than \$150,000. Between 20% and 25% have financial assets of less than \$50,000 (Figure 27).

Figure 27



Source: Old Dominion Partnership Survey, November 2011. Data Extracted by HSNV, May 2012

Though modest in many cases, accumulated financial assets among older households in Northern Virginia are higher than comparable households elsewhere in Virginia.



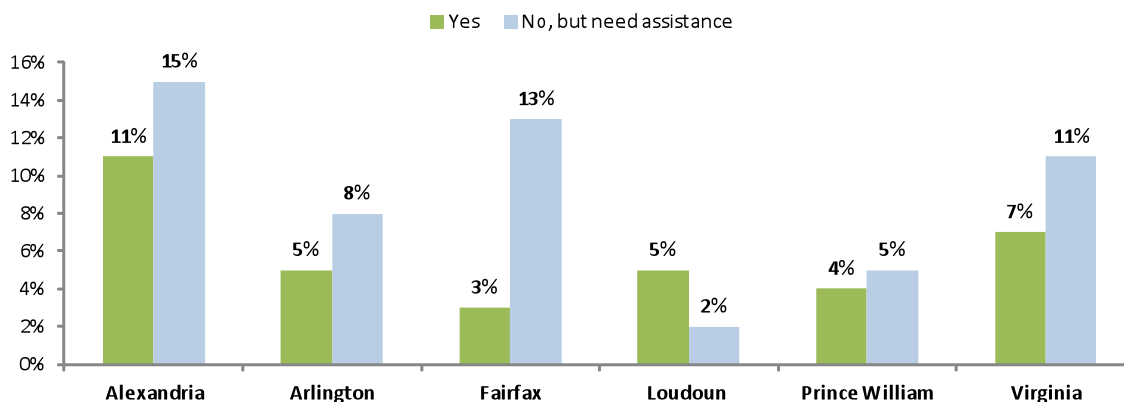
Region wide, between 15% and 20% of older Northern Virginia households report financial assets of less than \$25,000. About 12%, more than 20,000 households, have report assets of less than \$10,000.

## 12. *Perceived Economic Security*

Census and other empirical data indicate that aging Northern Virginians are more economically stable and secure than older populations statewide and nationally. A relatively high percentage of the local older population is gainfully employed, income levels are notably higher than elsewhere in Virginia and nationwide, retirement income levels are comparatively high, and the poverty rate is relatively low. Net financial assets are somewhat higher than elsewhere in Virginia.

These favorable circumstances stand in sharp contrast to the tens of thousands of older Northern Virginians with few financial assets, poverty level income, and marginal or poor health.

**Figure 28** Northern Virginia Population ≥65 Years of Age  
Do you currently receive some sort of public assistance, such as food stamps, energy assistance, etc.?



Source: Old Dominion Partnership Survey, November 2011. Data Extracted by HSA NV, May 2012

Survey data suggest considerable perceived economic insecurity among older Northern Virginians, prevailing general prosperity notwithstanding. Roughly 10% of the older population reports needing some form of public assistance that is not currently received (Figure 28).



## Section IV

### Health and Health Care

Health—physical, mental and psychological wellbeing—is an enduring concern among older populations. Its salience as a determinant of economic stability, independence, and quality of life increases with age.

Population characteristics and economic circumstances associated with good health predominate in Northern Virginia. The region is younger, more affluent, better educated, and more diverse than the U.S. and Virginia populations. The older population too is well educated, more stable economically, and is younger (skewed toward the younger end, those 65-74 years of age, of the older age group) than comparable populations statewide and nationally. These and related factors suggest, and usually are indicative of, a relatively healthy population.

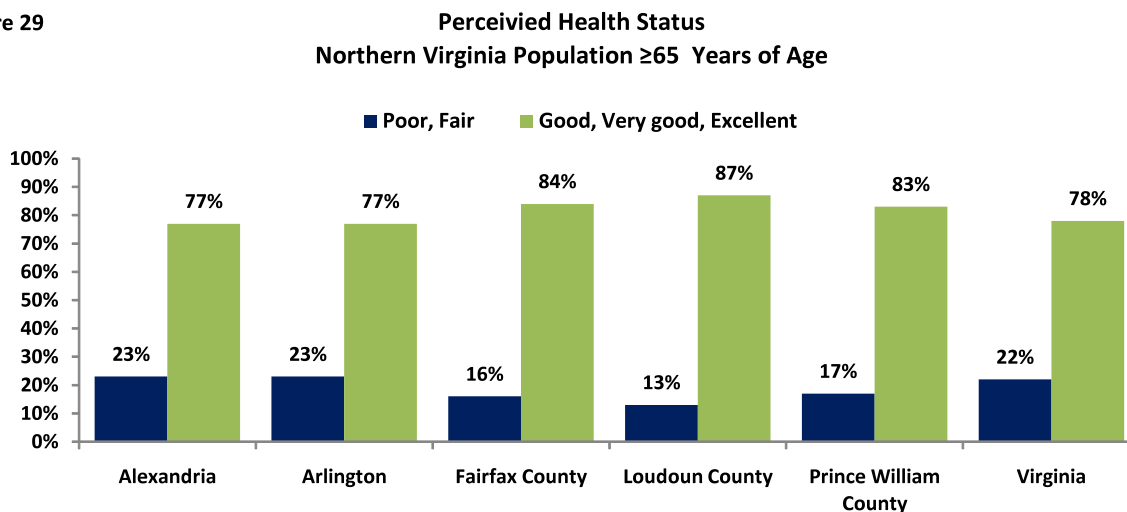
Disease, disability and death increase with age, with the sharpest age related increases among those 75 years of age and older.

#### 1. *Perceived Health Status*

Older adults are necessarily health conscious. Signs of aging and circumstances associated with aging often prompt the adoption of heretofore neglected health practices recommended to avoid the onset of chronic and disabling conditions. Many seek care and preventive health services based on perceived health status as well as in response to immediate signs and symptoms.

On average, more than 82% of Northern Virginia's older population reports their health to be good, very good, or excellent.<sup>16</sup> This is more than six percentage points (7.7%) higher than the Virginia older population state wide.<sup>17</sup>

Figure 29



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)



The percentage of those 65 years of age and older reporting fair or poor health is notably higher in Alexandria and Arlington than elsewhere in the region (Figure 29). This likely reflects the more urban nature of these communities and the higher than average percentages of residents  $\geq 75$  years of age in these localities.

## **2. *Health Related Behavior***

Health practices and behavior are important determinants of personal wellbeing. Physical activity, diet, alcohol and tobacco use, and willingness to seek preventive health services affect individual, and ultimately, community health. This is particularly true for older populations which are at greater risk of disease, disability and death.

Personal behavior known to affect health and the need for medical care among older Northern Virginians does not appear to differ greatly from that reported for comparable populations statewide and nationally. Dietary practices, exercise frequency, and tobacco use for example do not differ markedly from those reported elsewhere. Tobacco use is higher than desirable, dietary practices are not optimal, and reported exercise levels are not as high or as intense as desired, but they are not sufficiently out of the norm to warrant special consideration.<sup>18</sup>

Health monitoring and screening tests, recommended as the more effective means of identifying developing health problems, increase with age. The majority of those  $\geq 65$  years of age begin participating in blood pressure, cholesterol, blood sugar level monitoring and breast and colorectal cancer screening long before they reach retirement age.

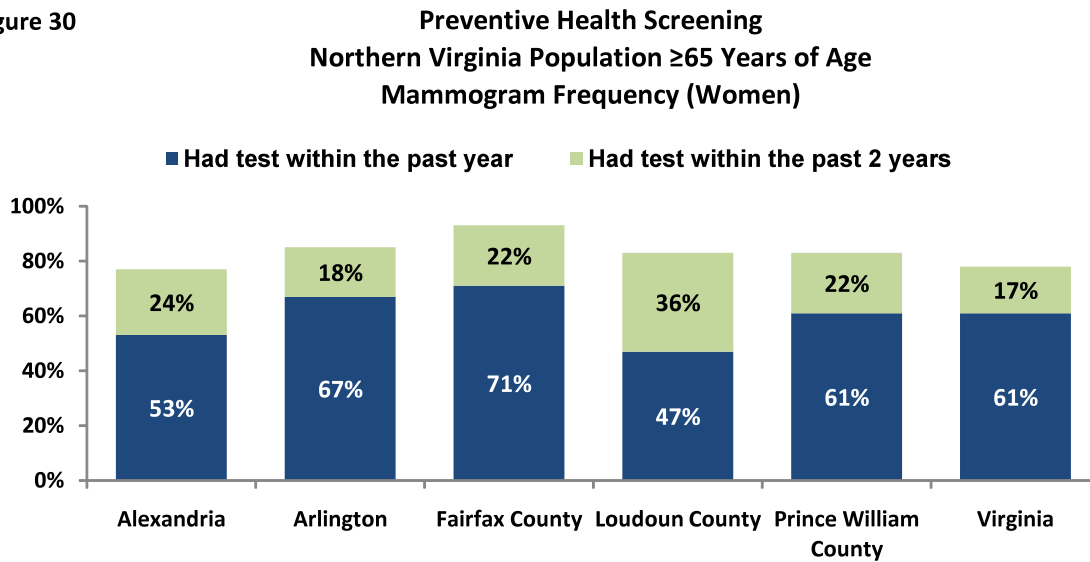
Diagnostic screening participation levels are relatively high among older Northern Virginia residents. Substantial majorities of those  $\geq 65$  years of age report having vision, blood pressure, cholesterol, and blood sugar level monitoring tests within the previous year. More than 90% report having these screening tests within the last two years.

### ***A. Mammography***

Periodic mammograms to screen for breast cancer are recommended for women 40 years of age and older. About 75% of U. S. women  $\geq 40$  years of age report getting screening mammograms within the last two years. The percentage increases to about 78% for women 50 years of age and older.<sup>19</sup>



Figure 30



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

More than 85% of Northern Virginia women  $\geq 65$  years of age report obtaining a mammogram within the last two years. This is about 10% higher than the reported Virginia statewide rate of 78% (Figure 30). Within Northern Virginia the percentage of older women reporting obtaining mammograms ranged from 77% in Alexandria to 93% in Fairfax County. The Alexandria screening rate is substantially below reported rates in other Northern Virginia localities.

### ***B. Colorectal Cancer Screening***

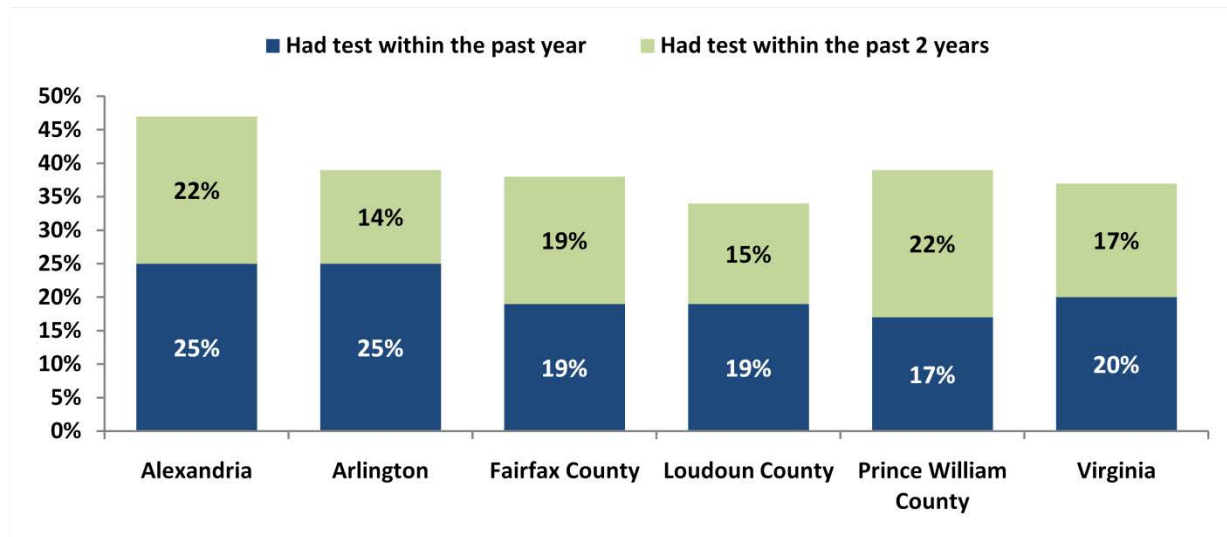
Periodic colonoscopies are recommended for those over 50 years as the more effective means of detecting early abnormalities of the large intestine that may be cancerous or precursors to cancerous lesions. Approximately 64% of adults over 50 years of age nationwide and about 69% of Virginians statewide report having ever had a colorectal screening examination.<sup>20</sup> Screening levels are higher in Northern Virginia, with nearly 75% reporting having ever had a colonoscopy (Figure 31).

More than a third of older Northern Virginians report they obtained a colonoscopy in the last two years. This represents a relatively high participation level, given that the recommended periodicity for colonoscopy is an examination at five year intervals for those between 50 and 80 years of age. It is notable that reported colonoscopy screening rate is substantially higher in Alexandria which has somewhat higher cancer incidence and prevalence rates than elsewhere in the region.



**Figure 31**

**Preventive Health Screening  
Northern Virginia Population ≥65 Years of Age  
Colonoscopy Frequency**



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

**C. Prostate Cancer Screening**

Prostate cancer is the more frequently diagnosed malignancy in the U. S. Though the value of universal adult male prostate cancer screening continues to be debated, annual screening examinations are recommended for males  $\geq 50$  years of age.<sup>21</sup> More than two-thirds of older Northern Virginia men report having a prostate cancer screening examination within the last two years (Figure 32). These percentages are generally comparable to those found statewide and nationally.

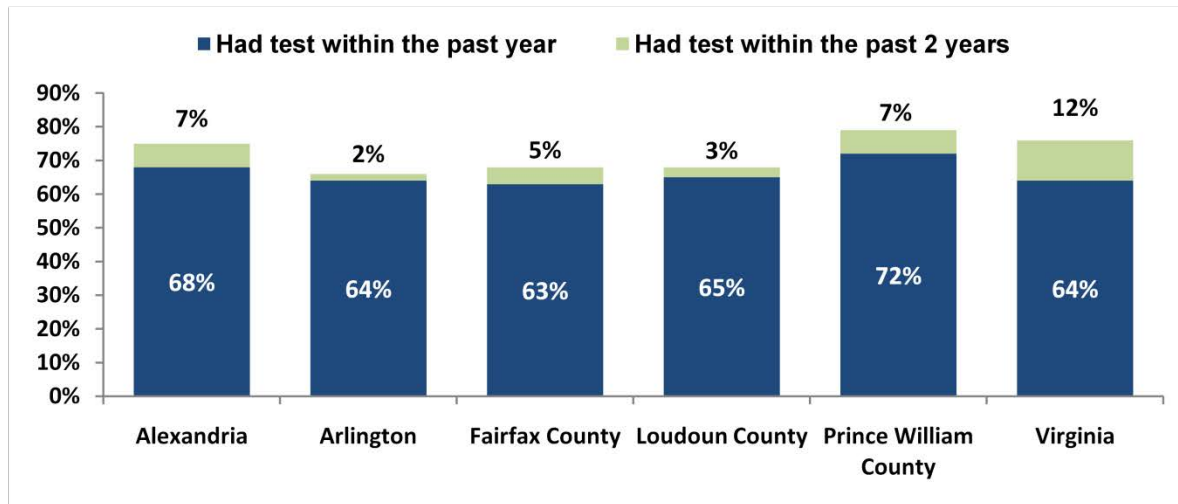
**D. Chronic Disease**

Chronic conditions and disease account for the large majority of sickness, disability and mortality among older populations.<sup>22</sup> Though most chronic diseases and conditions progress relatively slowly, they are seldom cured or eradicated and frequently affect negatively the quality of life of large numbers of older persons. Typically, these afflictions are more prevalent among older women than men.



**Figure 32**

**Preventive Health Screening  
Northern Virginia Population ≥65 Years of Age  
Prostate Exam Frequency (Men)**



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

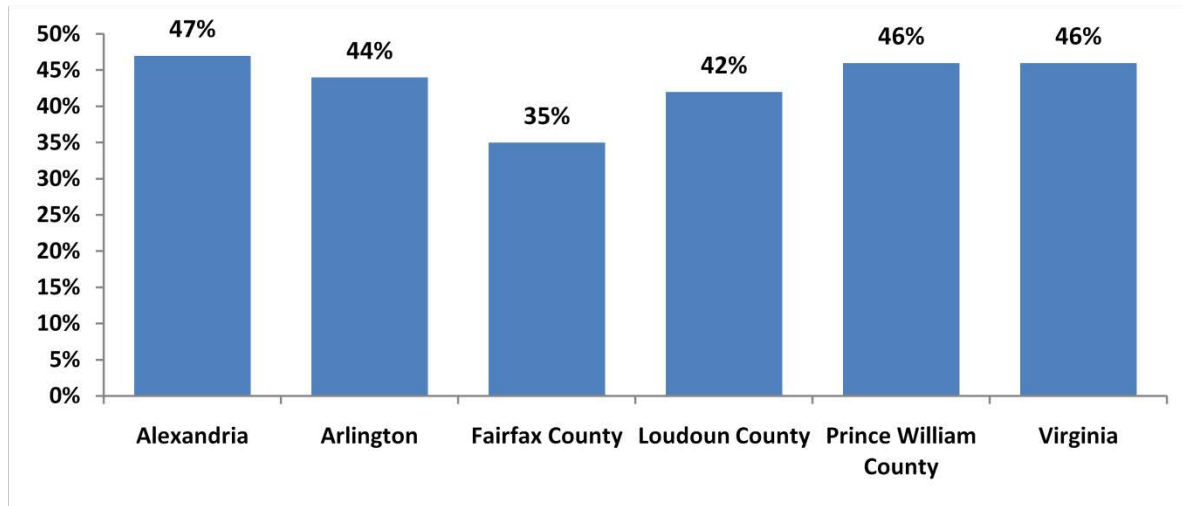
Centers for Disease Control and Prevention (CDC) data indicate that nearly half of the adult U.S. population has a chronic condition and that about one adult in four has multiple (two or more) conditions, that chronic disease accounts for more than 70% of U. S. deaths, that nearly one-sixth of the population (about 50 million people) has a disability that results from a chronic illness, and that by 2030 about 60% of those ≥65 years of age will have to manage at least one chronic disease.<sup>23</sup>

Though the incidence and prevalence of most chronic conditions in Northern Virginia, and among the older Northern Virginia population, are lower than statewide and nationally, substantial numbers of older Northern Virginians report having a least one chronic condition. Region wide about 40% of the older population reported having a chronic condition in 2011 (Figure 33). This is between 10% and 20% below reported Virginia and U.S. older population chronic disease levels. The more common chronic conditions nationwide and within Northern Virginia include rheumatoid arthritis, hypertension, cardiovascular disease, and diabetes.



**Figure 33**

**Chronic Illness, Condition  
Northern Virginia Population ≥65 Years of Age  
Have Chronic Illness (2011)**



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

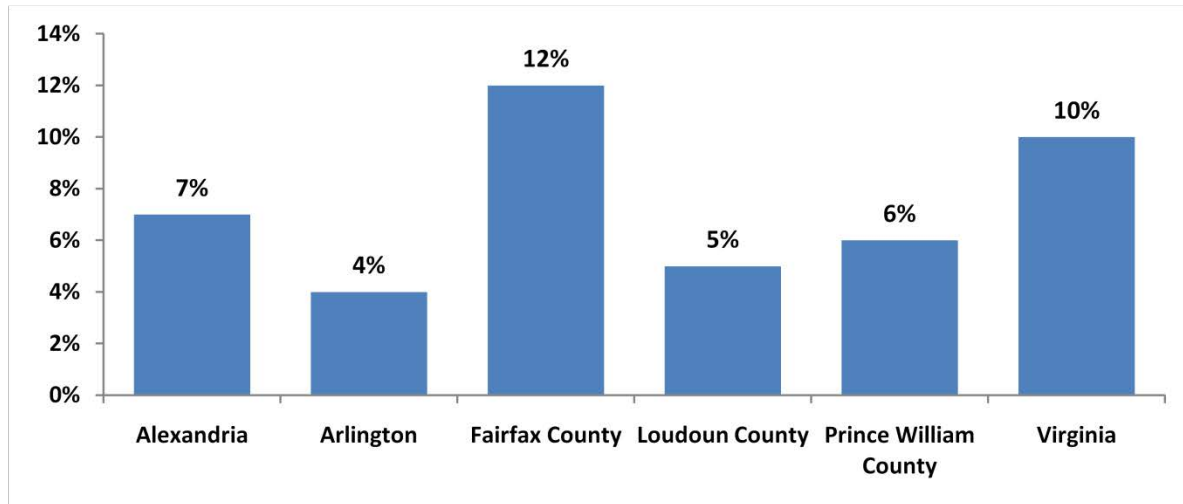
Within Northern Virginia older residents in Alexandria and Prince William County report higher chronic disease levels than elsewhere in the region.

Mental health problems account for a substantial component of chronic conditions and illnesses. More than 9% of the region's older population, nearly 18,000 persons ≥65 years of age, report having mental health problems. The regional rate is about 10% less than the Virginia rate statewide (Figure 34). Those reporting/acknowledging mental health difficulties reside disproportionately in Fairfax County. It is unclear whether the higher rate reported in Fairfax reflects a higher incidence and prevalence of these conditions than elsewhere in the region or the greater availability of care and resources in Fairfax.



**Figure 34**

**Chronic Illness, Condition**  
**Northern Virginia Population ≥65 Years of Age**  
**Have a nervous, emotional or psychiatric problem (2011)**



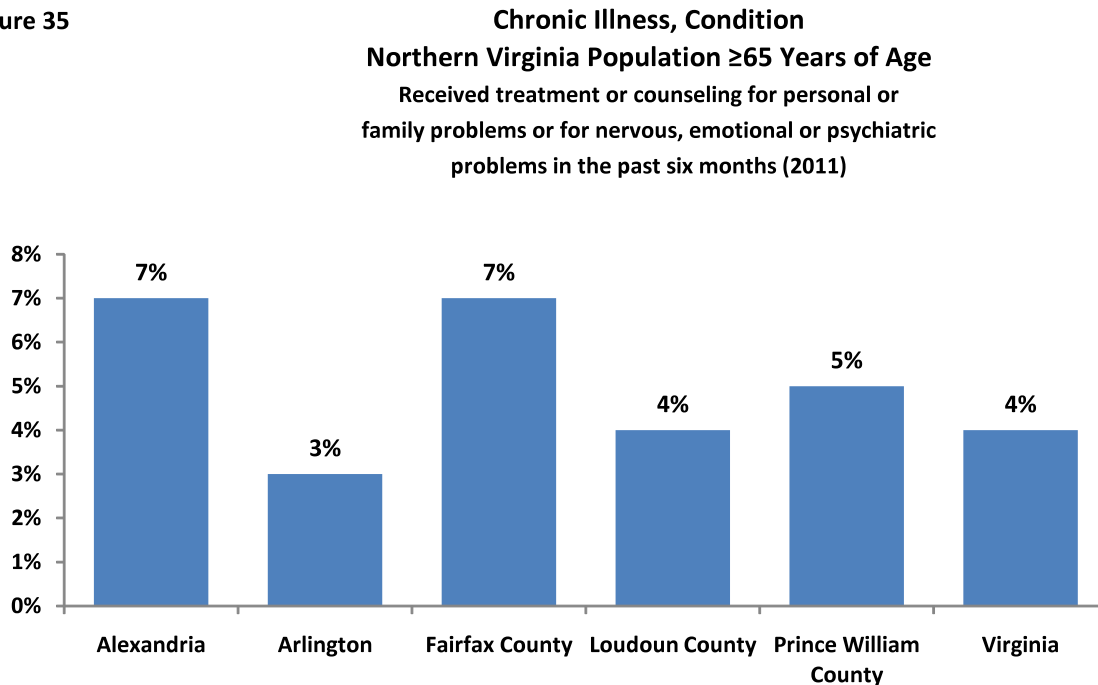
Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
 (Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

About two-thirds of those reporting a mental health condition indicated that they received some form of treatment for the problem (Figure 35). Treatment percentages were notably higher in Alexandria and Fairfax County than elsewhere in the region.

It is notable that among older persons reporting mental health conditions treatment levels were much higher throughout the region than elsewhere in Virginia. Whereas about 65% of those in Northern Virginia with mental health problems report obtaining care, only 40% of those reporting such conditions statewide report obtaining care for the problem.



Figure 35



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

### 3. Mortality

Mortality in Northern Virginia is relatively low. The region's age, gender, and disease specific death rates are lower than national rates and Virginia rates statewide. Death rates from all major life threatening chronic diseases, e.g., heart disease, cancer, stroke, diabetes, chronic obstructive pulmonary disease, decreased region wide over the last decade. Decreases in most categories have been substantial.

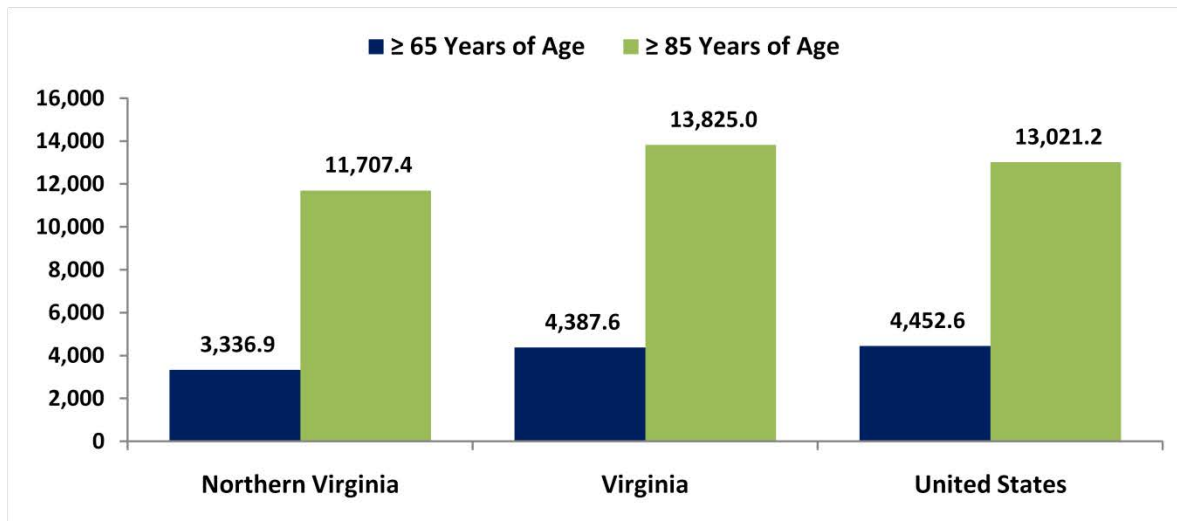
Mortality among older Northern Virginians too is substantially lower than among comparable age groups nationally and statewide. The overall death rate for Northern Virginia residents  $\geq 5$  years of age is about 24% less than the statewide Virginia rate and about 25% lower than the national rate (Figure 36). This pattern holds for the leading causes of death.

Though the magnitude of the difference narrows with advancing age significantly lower mortality continues for Northern Virginians  $\geq 75$  years of age and  $\geq 85$  years of age. Death rates among Northern Virginians  $\geq 85$  years of age and older are about 11% below national rates and 15% below Virginia rates statewide. The magnitude of the differences between Northern Virginia rates and U.S. and Virginia rates varies by disease and condition, but mortality among Northern Virginia's older population is lower than in comparable U.S and Virginia populations for all leading causes of death.<sup>24</sup>



**Figure 36**

**Mortality**  
**Northern Virginia Population ≥65 Years and ≥85 Years of Age**  
**Deaths per 100,000: Northern Virginia, Virginia, United States**



**Source: U.S. Center for Disease Control Wonder Online, 2012**

Across the board lower death rates among older Northern Virginians means greater longevity at all age levels. Increased longevity reflects superior health status. There is no indication that surviving longer beyond age 65, 75, or 85 years results in greater need for medical care and management.

#### **4. Hospitalization**

Superior health status and the availability of health related support services result in comparatively modest demand for medical care among Northern Virginia residents. Surgery rates, hospital and nursing home use, and emergency department use are substantially below state and national use rates.

In 2010, for example, the local hospitalization rate for the entire Northern Virginia population was about 58 discharges per 1,000 persons. This compares with a national and Virginia statewide rates of 114 discharges per 1,000 and 91 discharges per 1,000 respectively (Exhibit 37).<sup>25</sup> Within the region, hospitalization rates have been substantially higher in Alexandria and Prince William County than elsewhere.

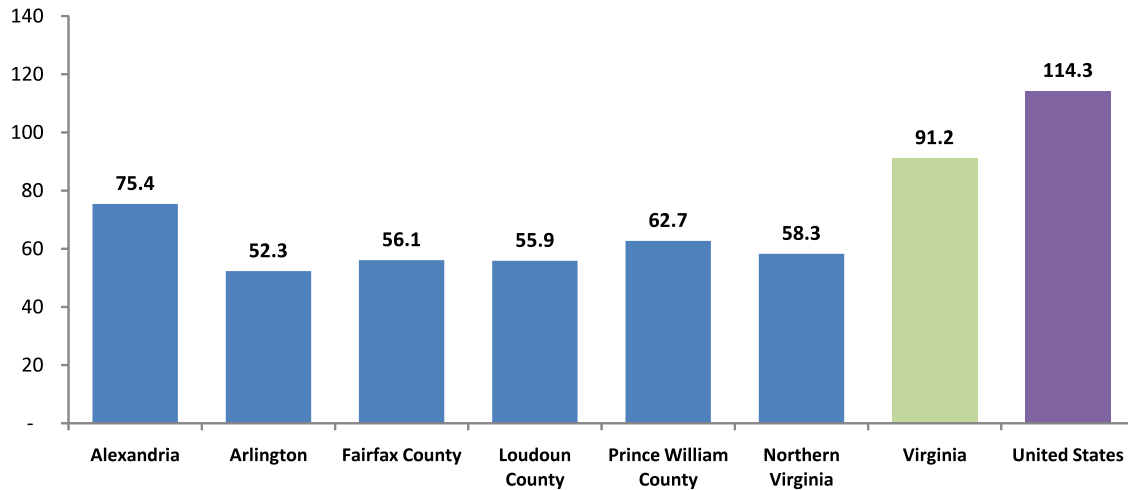
In the aggregate, Northern Virginia residents are about 44% less likely to require inpatient hospital care than other Virginians and more than 50% less likely the U.S. population.

These lower hospitalization rates have substantial economic and social implications. If Northern Virginia had hospital use rates comparable to those elsewhere in Virginia and nationally, there would have been more than 100,000 additional hospital admissions at Northern Virginia hospitals in 2010, with more than 450,000 additional inpatient days of acute care.



Exhibit 37

**Hospital Use**  
**Northern Virginia Resident Population, 2010**  
**Inpatient Discharges per 1,000 Persons**

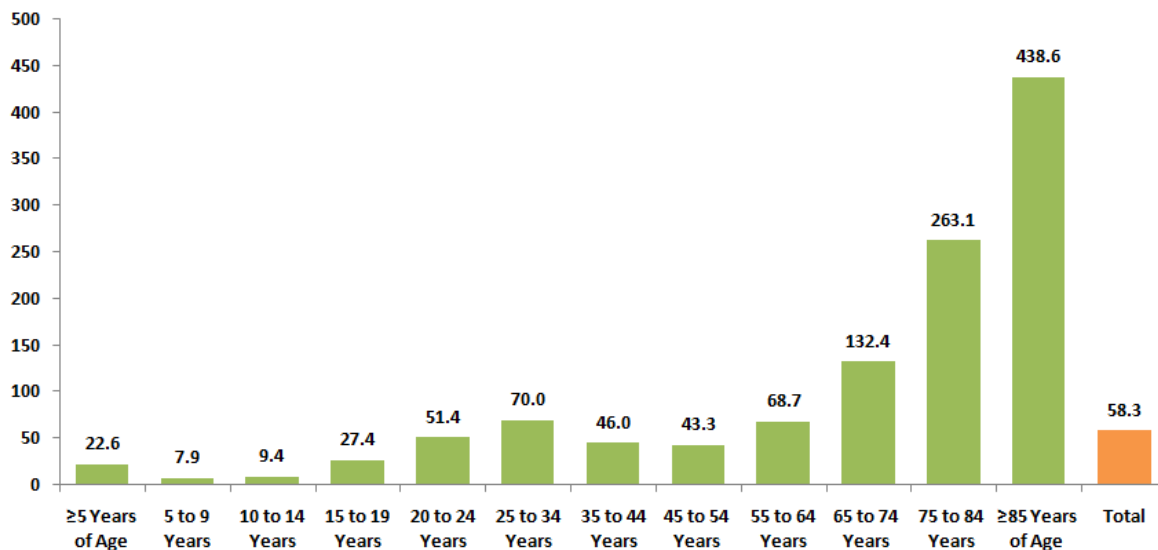


Source: VHI patient level database, 2010; U.S. Census 2010; CDC, Health U.S. 2011; Calculations HSAHV, 2012

Excluding maternity admissions, hospital use increases with age. In Northern Virginia hospitalization rates ranged from fewer than 10 hospital discharges per 1,000 persons for children five to fourteen years of age to nearly 440 discharges per 1,000 persons for those  $\geq 85$  years of age (Figure 38).

Figure 38

**Hospital Use**  
**Hospital Discharges per 1,000 Northern Virginia Residents by Age Group, 2010**



Source: U.S. Census, 2010; Virginia Health Information patient level data files, 2010

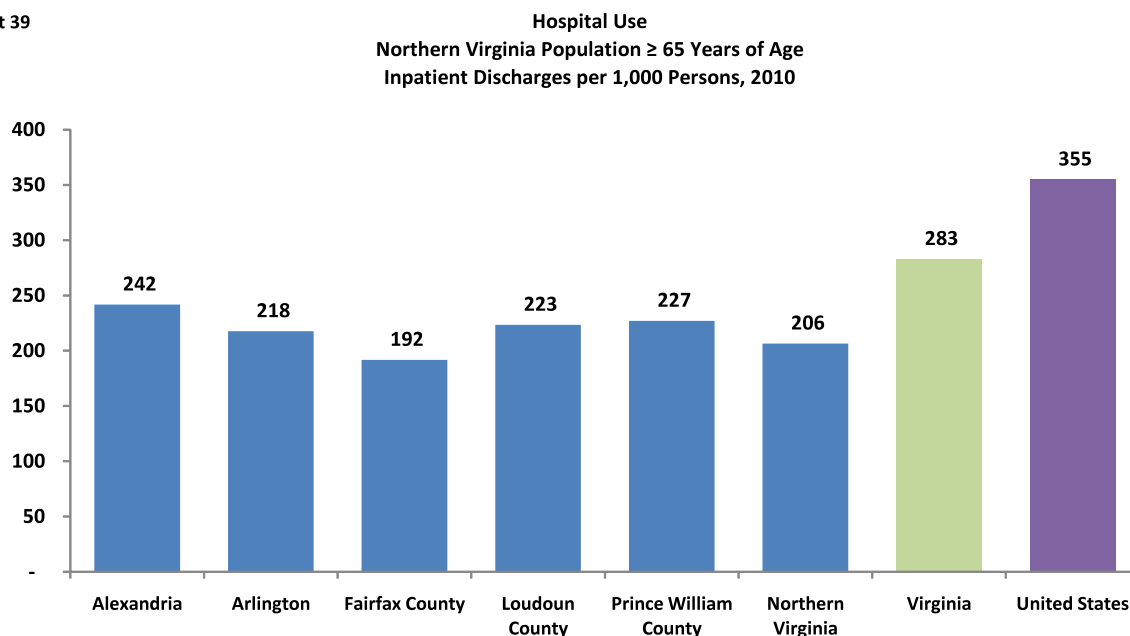


The larger increases occur among the older population. The discharge rate for those 65 to 74 years of age is more than 90% higher than the rate for those 55 to 64 years of age. Similarly, those 75 to 84 years of age have hospitalization rates that are 99% higher than those 65 to 74 years of age. The pattern continues with those  $\geq 85$  years of age. Northern Virginia residents 85 years of age and older are hospitalized about 67% more frequently than those 75 to 84 years of age.

Hospital use by Northern Virginians  $\geq 65$  years of age, too, is substantially less than national and Virginia statewide use levels. Older residents of Northern Virginia had 206 discharges per 1,000 persons in 2010, 27% fewer than older Virginians statewide and 42% less frequently than older Americans nationwide. The Northern Virginia rate is 44% lower than the rate of older Virginians outside of Northern Virginia.<sup>26</sup>

Hospital use by older residents varies considerably within the region. Older Fairfax County residents have notably lower hospital use than older residents of other Northern Virginia jurisdictions (Exhibit 39). Residents of Alexandria have higher hospital use than older residents of other localities. Hospitalization among Alexandria residents  $\geq 65$  years of age (242 discharges per 1,000 persons in 2010) is about 26% higher than among Fairfax County older residents (192 discharges per 1,000 in 2010).

Exhibit 39



Source: VHI patient level database, 2010; U.S. Census 2010; CDC, Health U.S. 2011; Calculations HSAHV, 2012

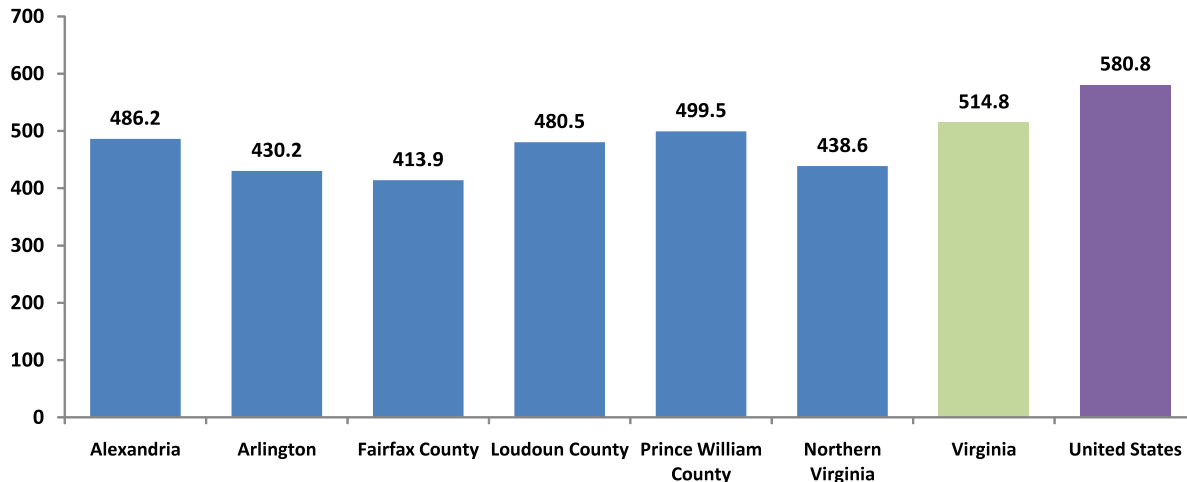
These use patterns apply to the region's older old populations, those  $\geq 75$  years of age and  $\geq 85$  years of age. The regional hospitalization rate for Northern Virginians  $\geq 85$  years of age was 439 discharges per 1,000 persons in 2010 (Figure 40). This is 15% below the Virginia rate state wide (515 discharges per 1,000 persons) and 24% below the national U.S. rate (581 discharges per 1,000



persons). The Northern Virginia rate for those  $\geq 85$  years of age is about 18% lower than the rate of Virginians  $\geq 85$  years of age outside of Northern Virginia.<sup>27</sup>

Figure 40

**Hospital Use**  
Northern Virginia Population  $\geq 85$  Years of Age  
Inpatient Discharges per 1,000 Persons, 2010



Source: VHI patient level database, 2010; U.S. Census 2010; CDC, Health U.S. 2011; Calculations HSAHV, 2012

Hospital use by those  $\geq 85$  years of age residents varies considerably within the region, but not as widely as among the younger old population, those  $\geq 65$  years of age. Residents of Prince William County, Loudoun County and Alexandria have higher hospital use than older residents of Fairfax County and Arlington (Figure 40). The Fairfax County rate, the lowest in the region, was about 17% lower than the Prince William County rate in 2010.

## 5. Hospitalization for Ambulatory Care Sensitive Conditions

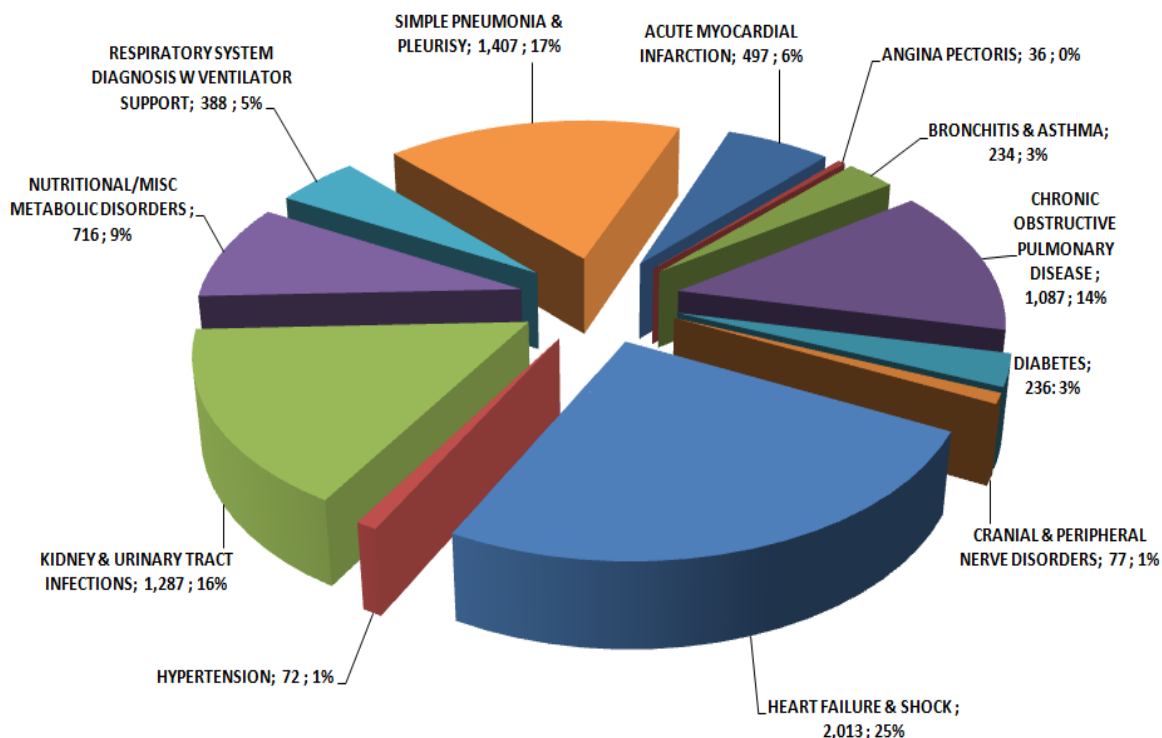
Ambulatory Care Sensitive Conditions (ACSC's) refers to medical problems that may be preventable, or at least manageable, with timely appropriate care. In many cases a change in behavior or timely intervention permits the health problem, usually a chronic condition, to be managed and hospitalization avoided. Hospitalization for ACSC conditions may reflect, or be an indication of, limited access to primary care. High ACSC hospitalization rates suggest endemic community health care system problems that need remediation.

Hospitalization for ACS conditions in Northern Virginia is low and decreasing. Adult Northern Virginia hospital admissions for conditions that respond to timely outpatient care occur at less than half the national rate. The ACS conditions for which older Northern Virginians are hospitalized most frequently are heart failure, pneumonia, urinary tract infections, and chronic obstructive pulmonary disease. These four conditions account for nearly three-fourths of ACSC hospital admissions among Northern Virginians  $\geq 65$  years of age (Figure 41).



There were 16,247 Northern Virginia ambulatory care sensitive discharges in 2000, about 13.2% of total discharges.<sup>28</sup> The number increased to 16,429 in 2010, about 12.7% of total discharges. The ACS discharge rate decreased from 8.9 discharges per 1,000 persons in 2000 to about 7.6 discharges per 1,000 in 2010, a reduction of nearly 15%. During this period the overall hospital discharge rate fell from about 67 discharges per 1,000 persons to about 58 discharges per thousand, a decrease of about 13%. The ACS hospitalization rate decrease was greater (more than 15% higher) than the decrease in the overall hospital admission rate. These data suggest that access to basic primary care services is improving and unnecessary hospitalizations are being reduced.

**Figure 41**  
**Ambulatory Care Sensitive Hospital Discharges by Condition**  
**Northern Virginia Residents ≥65 Years, 2010**  
**Distribution (#, %) of Selected Ambulatory Care Sensitive DRGs**

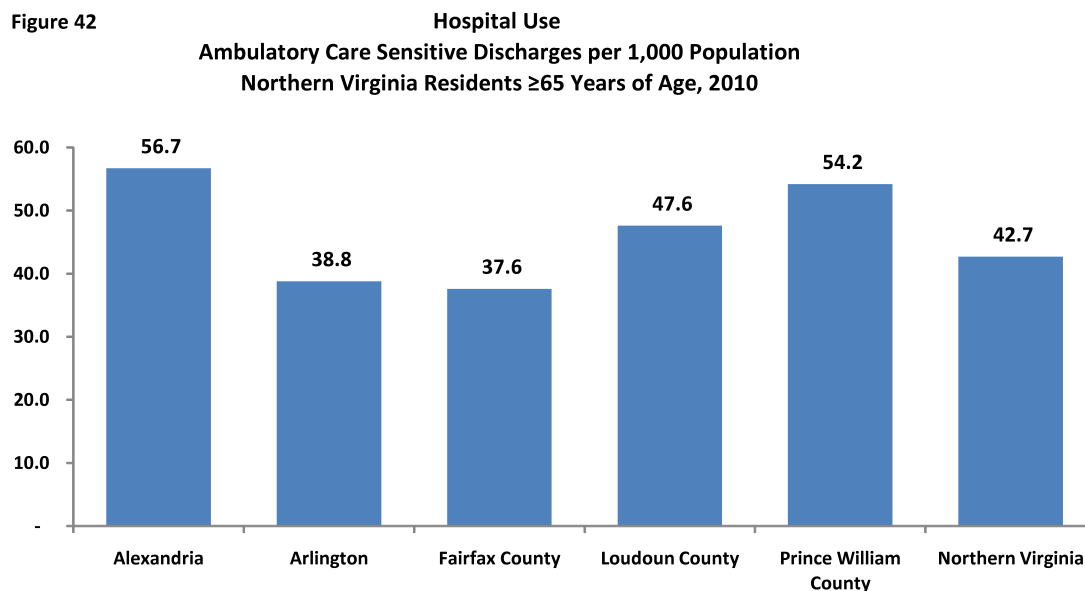


Source: VHI patient level data files, 2010; Calculations & tabulations, HSAHV staff, 2012.

As with hospital admissions generally, hospitalization for ACS conditions increases with age. In Northern Virginia about half of ACSC discharges (8,222 of 16,429 discharges in 2010) were among those ≥65 years of age. The ACSC discharge rate among older Northern Virginia residents is typically between one-third and one-half the national rate. Within the region, the hospitalization rate for ACSC conditions is notably higher in Alexandria than elsewhere (Figure 42). The older population discharge rate for ACSC conditions is lower than the regional average in Loudoun County and Arlington.



Figure 42



Source: Virginia Health Information patient level data files, 2010; Calculations & tabulations, HSAHV 2012  
(Fairfax County includes Falls Church and Fairfax City; Prince William County includes Manassas and Manassas Park)

Unlike admissions in the aggregate, ACS admissions are typically higher among males than females. Nationwide, about 14% of Medicare enrollee hospitalizations are for ACS conditions. In Northern Virginia this percentage is somewhat higher, nearly 17%. This is a function of lower overall hospitalization rates among older Northern Virginians, not a higher ACSC hospital use rate.

## 6. *Hospital Mortality and Readmission Rates*

Hospital death and readmission rates are commonly used measures of medical care quality and effectiveness. Overall, Northern Virginia hospital mortality and readmission rates (deaths in hospital or within 30 days of hospital treatment; readmission to a hospital within 30 days of discharge for the same condition/diagnosis) are comparable to those seen elsewhere statewide and nationally. Though fewer Northern Virginians are hospitalized each year, and the associated number of hospital deaths and readmissions are relatively low, the percentages of deaths and readmissions among those hospitalized do not differ significantly from national levels.

This pattern holds for older residents hospitalized in Northern Virginia. Medicare patient hospital mortality and readmission in Northern Virginia for three conditions that frequently result in hospitalization of those ≥65 years of age do not differ meaningfully from national rates.<sup>29</sup> In 2010, 30-day hospital mortality rates for heart attack ( $\pm 14.3\%$ ), pneumonia ( $\pm 10.5\%$ ), and heart failure ( $\pm 10.6\%$ ) were slightly lower than national rates. The modest difference is not significant. The same is true for 30-day readmission rates. The regional readmission rates for heart attack ( $\pm 18.2\%$ ), pneumonia ( $\pm 17.8\%$ ), and heart failure ( $\pm 23.9\%$ ) were modestly lower than national rates, but the difference is not substantive.<sup>30</sup>



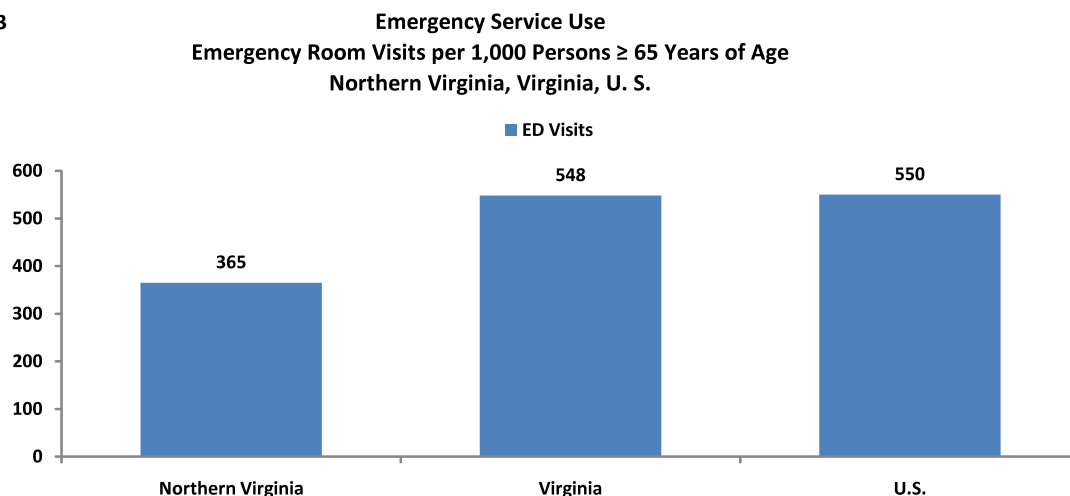
It appears that sustained, focused effort is needed to reduce both the 30-day death rate and the 30-day readmission rate. The Medicare program is poised to restructure reimbursement (payment) to provide economic incentives that penalize inefficient and ineffective hospital admission and treatment. These incentives would have application in Northern Virginia and could over time reduce mortality and readmission rates among older residents.

## 7. *Emergency Service Use*

Emergency medical services play an increasingly important role in the provision of medical care. Use of emergency departments has increased steadily nationally and locally for more than a decade. During the last decade the national hospital emergency department use rate increased by more than 15%, from fewer than 360 visits per 1,000 persons annually in 2000 to about 415 visits per 1,000 in 2010. The statewide Virginia pattern is similar. The Virginia rate increased from 348 visits per 1,000 persons in 2000 to about 400 visits per 1,000 in 2010.

In addition to increasing service volumes, emergency departments are playing a larger role in hospital operations. The percentage of hospitalized patients who are admitted through (i.e., are first seen in) emergency departments has increased steadily for about two decades. Nationwide about 45% of those admitted to acute care hospitals are first seen in the emergency department.<sup>31</sup>

Figure 43



Source: CMS, Medicare Data for the Geographic Variation Public Use File, July 2012; Virginia Health Information 2012; HSAHV Surveys, 2010

Locally the percentage of hospitalizations that come through the emergency department has increased to about 60%. The emergency department is the largest source of hospital admissions at all Northern Virginia hospitals.

Region wide there were nearly 600,000 emergency department visits (to all facilities in the region) in 2010. The use rate was about 265 visits per 1,000 residents. This compares with about 405 visits per 1,000 persons statewide and about 415 visits per 1,000 nationally. Thus, the overall Northern Virginia emergency service use rate is about one-third lower than the Virginia and U.S. rates.



Older populations have higher emergency department use than younger adults. In most communities, those  $\geq 65$  years of age, who typically represent 11% to 13% of the population, account for about 20% of hospital emergency department visits. Nationally and statewide the emergency department use rate for older persons, 550 visits per 1,000 population  $\geq 65$  years of age, recently has been about 24% higher than the rate for other adults, 444 visits per 1,000 persons 18 to 64 years of age.<sup>32</sup>

Emergency department use among Northern Virginians  $\geq 65$  years of age is substantially lower than statewide and nationally (Exhibit 43). Nearly a third of Northern Virginians  $\geq 65$  years of age report a hospital emergency room visit within the last two years.<sup>33</sup> In 2010 older Northern Virginians recorded about 358 emergency department visits per 1,000 persons in local hospitals. This was nearly 35% less than state and national rates of about 550 visits per 1,000 population  $\geq 65$  years of age.

Efforts to reduce unnecessary emergency department use notwithstanding, both the absolute number and the rate of emergency rooms visits by older populations are likely to continue to increase. Though the differences between the Northern Virginia rate and national and statewide rates are likely to decrease somewhat, the Northern Virginia rate is expected to remain well below national and statewide rates over the next two decades.

Use of hospital emergency medical services varies widely within the region. Use rates by zip code range from fewer than 150 visits per 1,000 older residents to more than 600 visits per 1,000 population  $\geq 65$  years of age.<sup>34</sup> Use rates are higher in communities with lower personal and family income: along the Route 1 corridor (south Arlington through eastern Prince William County, in the Manassas/Manassas Park area, in communities inside the Capital Beltway in central Fairfax County, and in the Herndon area.

Relatively low emergency service use rates among older Northern Virginians is not indicative of limited capacity, suppressed demand, or limited access to necessary care. Low use rates for the older population are endemic to the region.<sup>35</sup> The lower rates reflect a relatively healthy population with fewer chronic conditions, lower accident and injury rates, and superior access to primary medical care. This pattern, and these circumstances, should remain in place over the next two decades.

## **8. Access: Health Insurance Coverage**

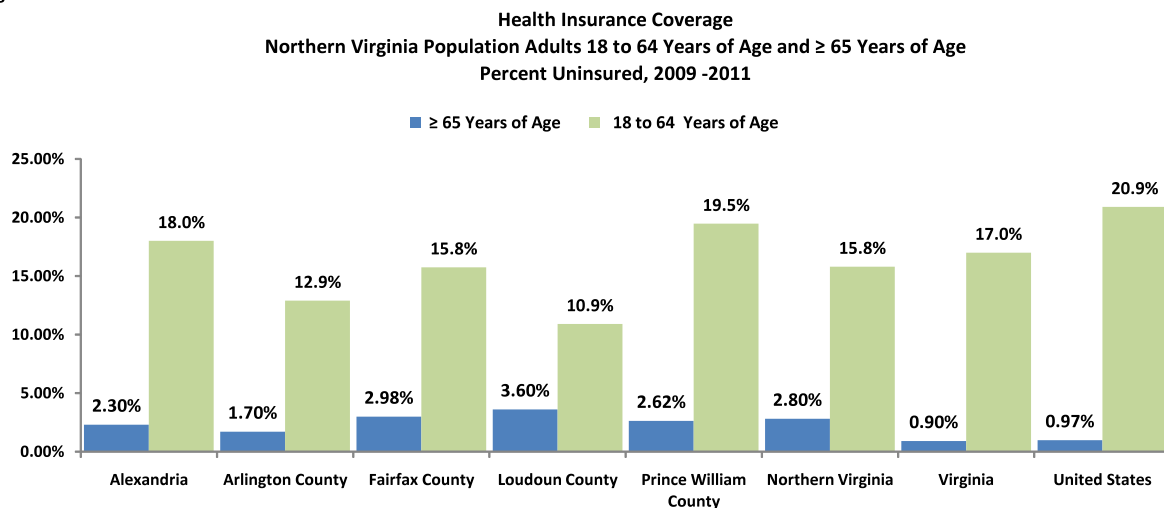
Barriers to obtaining medical care in Northern Virginia are largely economic. The region has the physical and human resources needed to provide state-of-the-art medical care to those who need it. Cost and affordability are the principal obstacles to accessing these resources. For most people health insurance is the key to affordability. Though charity and reduced price care is available at community hospitals for medical emergencies, those without adequate insurance coverage usually have limited access to timely routine medical care.

Health insurance coverage levels overall are higher in Northern Virginia than nationwide. Between 2008 and 2010, about 12.3% of the Northern Virginia population was uninsured compared with



15.2% nationwide. Insurance coverage among Northern Virginia adults 18-64 years of age follows a similar pattern. In recent years (2008 – 2010) about 15.7% of Northern Virginia adults 18-64 years of age were uninsured compared with Virginia and national rates of 17.0% and 20.9% respectively (Figure 44).

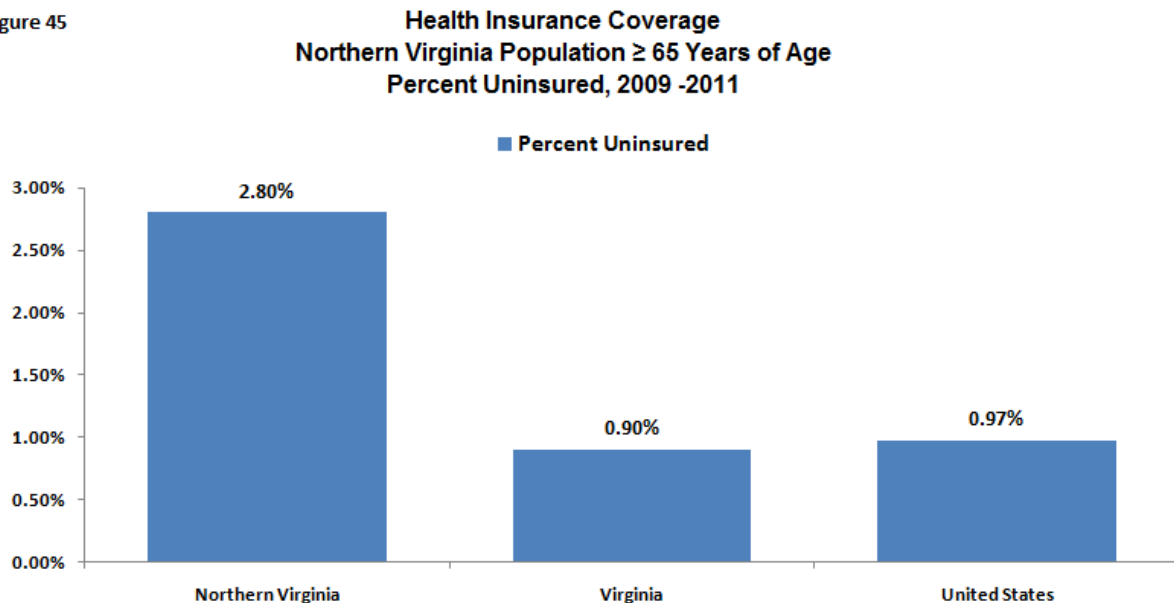
Figure 44



Source: U.S. Census, 2009-2011 American Community Survey; Calculations, HSAHV, 2012

This favorable local pattern does not hold for older Northern Virginians. In contrast with superior coverage levels for children and adults 18 to 64 years of age, uninsured levels among Northern Virginians ≥65 years of age are about three times higher than Virginia and national rates (Figure 45). Nearly 3% of older Northern Virginians were uninsured between 2009 and 2011, compared with less than 1% statewide and nationally. This means that more than 5,000 older Northern Virginians were uninsured during the last three years (2009 – 2011).

Figure 45

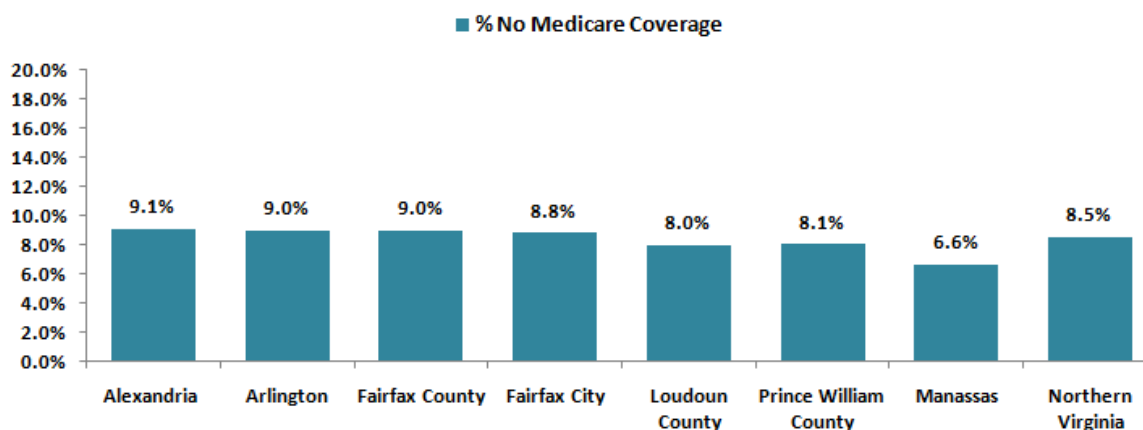


Source: U.S. Census, 2009-2011 American Community Survey; Calculations, HSAHV, 2012



This anomaly results from the comparatively small percentage of older Northern Virginians with Medicare and (or) Medicaid coverage. Region wide, about 8.5% of older Northern Virginians were without Medicare coverage between 2008 and 2010 (Figure 46). This compares with 4.1% statewide and 4.0% nationally.<sup>36</sup> In recent years more than 15,000 Northern Virginians  $\geq 65$  years of age were without Medicare coverage. The number and percentage of older Northern Virginia residents not qualifying for Medicare coverage decrease with age. During the last three years about 11% of those between 65 and 74 years of age were without Medicare coverage, compared with about 5.0% of those 75 years of age and older. More than 3,500 of those  $\geq 75$  years of age are without Medicare coverage. About two-thirds of older Northern Virginians without Medicare coverage are women.

**Figure 46** **Health Insurance Coverage**  
**Percent of Northern Virginia Residents  $\geq 65$  Years of Age without Medicare Coverage**



Source: U.S. Census Bureau; 2008 - 2010 American Community Survey  
(Fairfax County includes Falls Church; Prince William County includes Manassas Park)

Lack of health insurance among older residents is closely correlated with economic circumstances. Between 2008 and 2010 there were about 4,100 residents with incomes less than 50% of the federal poverty level. More than 600 (about 13%) of these older Northern Virginians have no health insurance of any kind. More than 1,000 older residents with incomes less than 150% of the federal poverty level had no health insurance.

## 9. *Nursing Home Care*

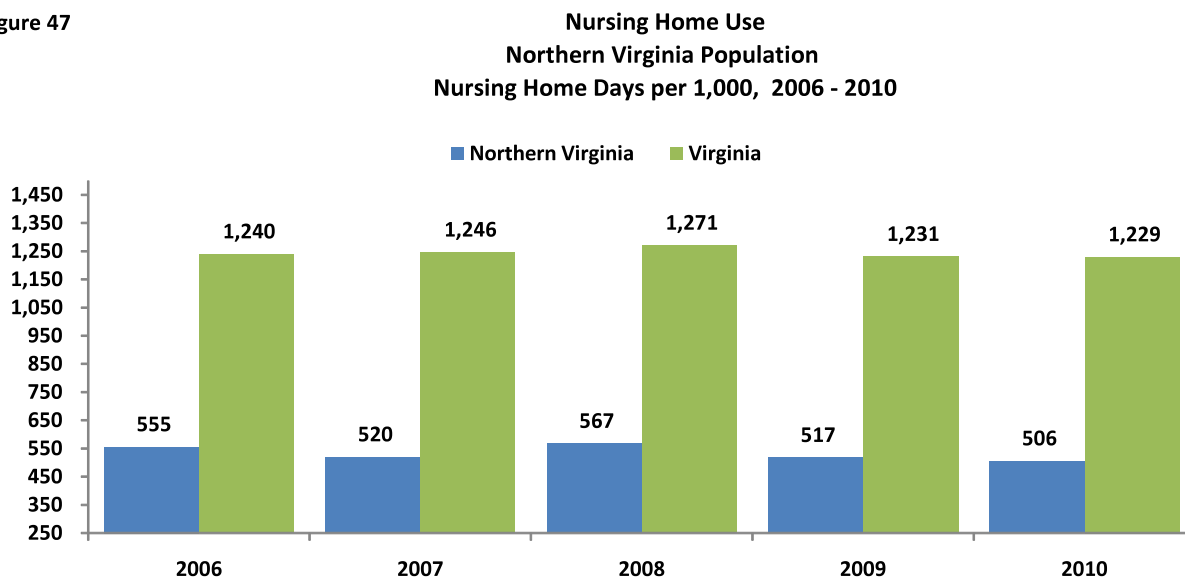
Use of long-term nursing care services increases sharply with age. Although nursing home care is required by a number of younger adults with disabling injuries or disability conditions, more than 90% of those in Northern Virginia long term nursing care facilities are  $\geq 65$  years of age. Ordinarily substantial increase in the older population would be expected to result in a proportionate increase in demand for nursing home care. However that has not been the case for the last 25 years in Northern Virginia.



Demand for, and use of, long-term nursing care services in Northern Virginia is atypically low. It is likely to remain so for many years. Several factors distinguish the Northern Virginia population's need for, and use of, nursing home care:

- The region has a comparatively young population, with relatively small percentages of the population  $\geq 65$  years and  $\geq 75$  years;
- Northern Virginia's older population is relatively healthy, with demand for hospital care—the source of the majority of nursing home admissions—much lower than nationally and elsewhere in Virginia;
- Northern Virginia has a relatively wide array and ample supply of support services (e.g., assisted living facilities, home health care) for the elderly that function as alternatives to long-term nursing care for some;
- With some annual variation, the local age specific use rate for nursing home care is low and has been steadily decreasing for nearly three decades. The number of days of nursing per 1,000 population decreased by about 9% between 2006 and 2010 (Figure 47).
- The decrease was greater (15.4%) among the older population (Figure 48).

Figure 47



Source: Virginia Health Information Licensure files 2006 - 2010; U.S. Census 2006 -2010; Calculations HSAHV, 2012

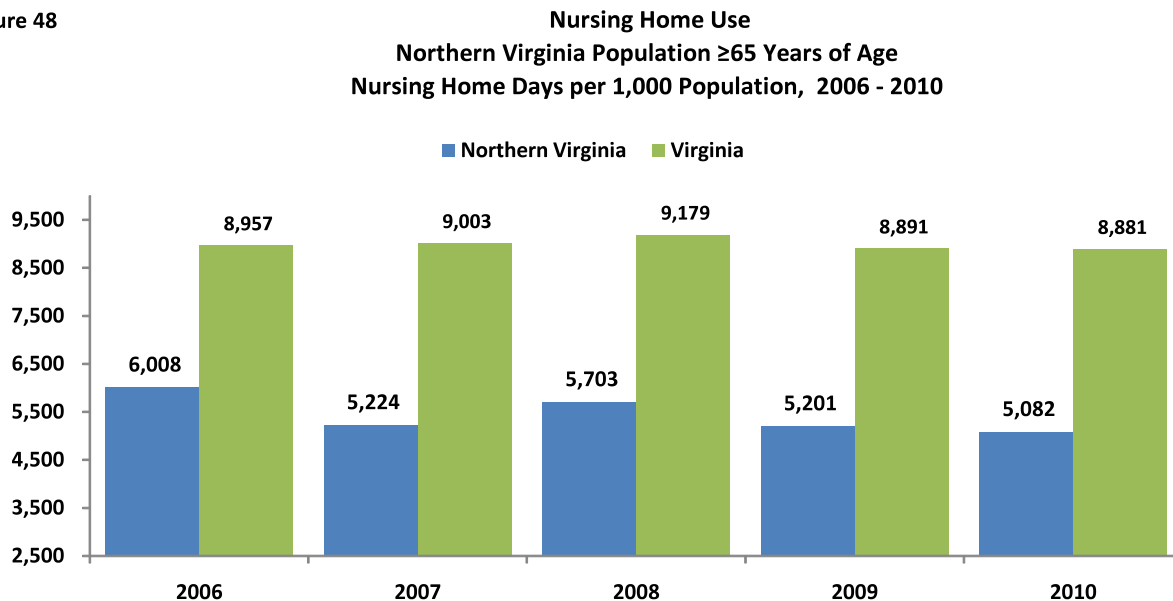
These recent use rates indicate that the decreasing use rates that became evident in the mid 1980s have yet to run their course.<sup>37</sup> Though the number of persons over 65 years of age has increased steadily over the last three decades, and is poised to grow at a faster rate over the next two decades, there is no indication that this will result in a significant increase in aggregate demand within the next decade.

Over the last 25 years the number of nursing home days of care per 1,000 population  $\geq 65$  years of age has decreased by more than 60 percent.



These data also reflect the changing nature of long term nursing care services and the clinical and health related needs of the region's older population. The percentage of nursing home residents admitted from hospitals has increased steadily, increasing from about 50% a decade ago to more than two-thirds today. The average age at admission too has increased steadily, increasing from 76.4 years a decade ago to about 76.8 years currently. These patterns are likely to continue.

Figure 48



Source: Virginia Health Information Licensure files 2006 - 2010; U.S. Census 2006 -2010; Calculations HSAHV, 2012

Much of the change in source of admission and in the age at admission is a function of the shift of potential nursing home patients with fewer and less severe limitations and disabilities to other service settings. As a result of this ongoing change, the current (and prospective) mix of nursing home patients is older, more debilitated, and with a larger number of chronic conditions than a few years ago.

These developments reflect the relatively wide array of alternatives to nursing home care and the attractive mix of long-term nursing care services, especially continuing care retirement communities (CCRCs) and other adult care residencies, available to older Northern Virginians.<sup>38</sup> Continued support for these alternative services will be necessary to permit these positive nursing home use patterns to continue.

## 10. Home Health Care

Home health care refers to a set of clinical and support services that include skilled nursing care, physical and occupational rehabilitation services, and professional monitoring and management of care provided outside of an institutional setting, usually in the patient's home. Home care often follows discharge from an acute care hospital or an inpatient rehabilitation facility. Medicare, Medicaid, and many private insurance plans pay for a set of specified home care services. Beyond providing needed care in a convenient, lower cost setting, home care treatment plans often are



designed to help those with disabilities and chronic conditions avoid hospitalization or admission to a nursing home.

Home health care demand is elastic, a function of clinical need, family status and living circumstances, and the availability of a source of payment. The history of the Medicare program show that expressed demand tends to be a function of the array of services covered and the rigor with which the program monitors and otherwise controls service use. Use of Medicare certified home health care varies widely geographically, with demand substantially and consistently higher in southern states and communities than elsewhere. In 2010, for example, the number of home health visits per 1,000 Medicare enrollees ranged from 381 in Hawaii to 9,049 in Texas, a more than 20 fold difference. Nationwide about 10% of Medicare beneficiaries use home health care in a given year.

Nationally, the average number of home health visits per 1,000 Medicare enrollees in 2010 was 3,533. The average number of visits among Virginia enrollees was considerably less (33% lower) at 2,383 visits per 1,000 enrollees.<sup>39</sup> Reflecting the region's healthier older population, fewer chronic conditions and accidents, home health visits among Northern Virginia Medicare enrollees is substantially lower than statewide and nationally. In 2010, the estimated Northern Virginia rate was about 1,860 visits per 1,000 Medicare enrollees, which was about 46% below the national visit rate and about 22% below the Virginia rate statewide.

Though it is not likely that the number of home health care visits per Medicare enrollee will increase to the national or statewide mean, it is likely that aggregate demand for nursing home care will more than double over the next two decades.

Assuming continuing Medicare program support for the effective use of home health care, these services should be readily available in the region. Home health care agencies, which are not capital intensive, rise and expand quickly in response to market conditions and changing medical practice.



## Section V

### Living Arrangements

Housing costs and supportive living arrangements are major concerns for many older persons. Reduced economic means and increasing disability and dependence make it difficult for many older persons to obtain living space and arrangements appropriate to their needs and circumstances. This is especially true in Northern Virginia where housing and housing related costs are high.

Experience and formal studies show clearly that, with few exceptions, older persons prefer to remain as independent, self sufficient, and private as possible. These preferences usually are expressed as a strong desire to remain in their home as long as circumstances permit, to “age in place” when possible.

Living arrangements for the older population may be seen as a continuum of options. For those unable to remain fully independent in a private residence, the pattern often entails navigating a housing continuum from one setting to another coincident with a gradual loss of independence and self sufficiency. Housing options include single family homes, multi-unit options such as apartments and condominiums, congregate living, and assisted living. These options vary considerably in terms of their availability, affordability, and ability to meet the special needs of prospective residents. The end point of the housing continuum for some is the nursing home, which provides residential, social, medical, and custodial services.

Older persons need not move in a straight line from one setting to another as their needs change. Semi-dependent and dependent older persons can live in a variety of settings, including their own homes and apartments, if the physical environment is made more supportive, caregivers are available to provide assistance, and affordable services are accessible. There is increasing emphasis on a more flexible array of living arrangements and less emphasis on institutional care where other, more desirable, options are available. The movement away from the institutional setting is seen most clearly in the decreasing reliance on nursing home care and increasing reliance on home health care, day care, and assisted living arrangements.

#### ***1. Household Composition, Distribution***

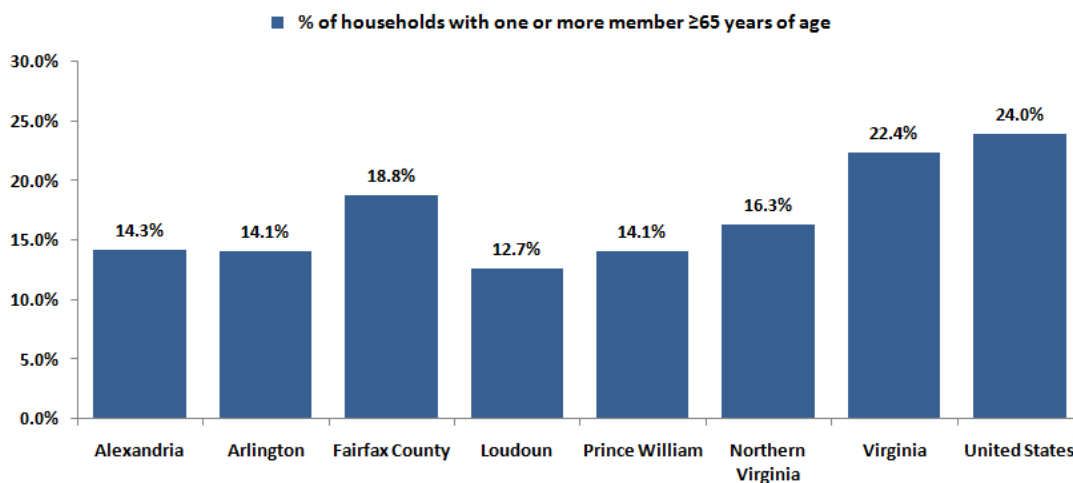
The number and percentage of older households—households with at least one person 65 years of age or older—varies widely within the region. Fairfax County has a substantially larger number and higher percentage of older households than other local jurisdictions. Between 2006 and 2010 the percentage of older households in Northern Virginia jurisdictions ranged from 12.7% in Loudoun County to 18.8% in Fairfax County (Figure 49).

Reflecting the region’s overall younger demographic profile, the percentage of households with older members in Northern Virginia is substantially lower in all jurisdictions, including Fairfax County, than statewide and nationally.



Figure 49

**Northern Virginia Households**  
**Households with One or More Member  $\geq 65$  Years of Age, 2006 - 2010**

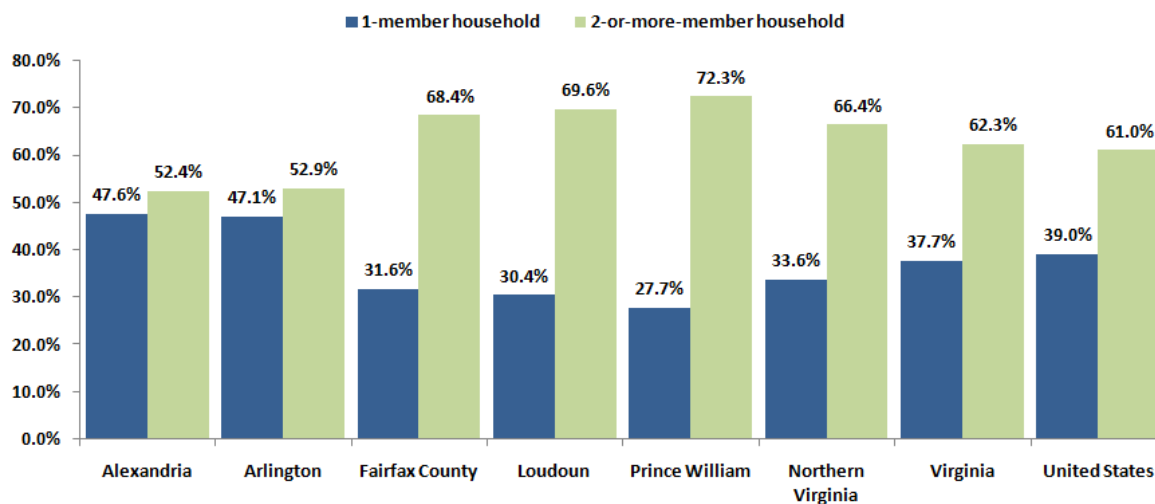


Source: U.S. Census Bureau, 2006-2010 American Community Survey; Calculations HSNV, 2012.  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

The percentage of households with one or more member 65 years of age or older is about 27% lower than the statewide Virginia percentage and about 32% lower than the national percentage. Nationally, nearly one-fourth of households have at least one member person aged  $\geq 65$  years of age (Figure 49).

Figure 50

**Northern Virginia Older Households**  
**Households with One or More Member  $\geq 65$  Years of Age, 2006 - 2010**  
**Percent By Size of Household**



Source: U.S. Census Bureau, 2006-2010 American Community Survey; Calculations HSNV, 2012.  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)



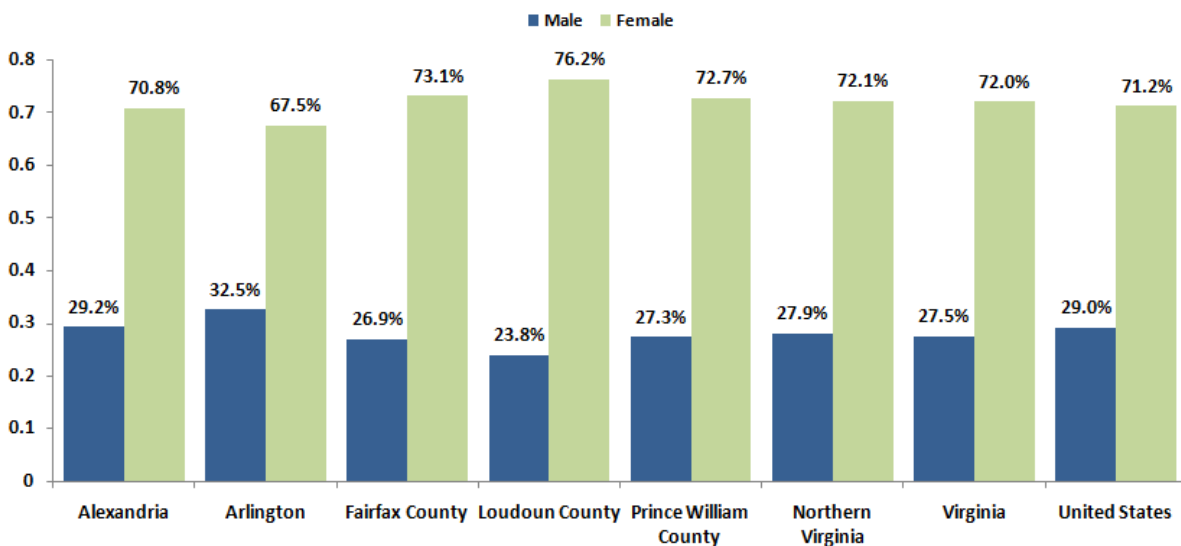
About one-third of Northern Virginia households with a member 65 years of age or older are single member households (Figure 50). The percentage is substantially higher in Alexandria and Arlington, where about 47% of the older households are single member. The Alexandria and Arlington percentages reflect the more urban nature of those jurisdictions. The percentages of single member older households in these jurisdictions are significantly higher than statewide and national percentages.

Not surprisingly, the large majority of single member older households are female. Region wide about 72% of single member older households are female; 28% are male. Female single member older households outnumber male single member households by a margin of 2.6 to 1 (Figure 51).

Though Alexandria and Arlington have marginally higher percentages of older male single member households than the rest of the region, the pattern does not vary greatly region wide. The Northern Virginia distribution of older households by gender is generally consistent with those found elsewhere in Virginia and nationwide (Figure 51).

**Figure 51**

**Northern Virginia Households**  
**Percent of Householders ≥65 Years of Age Living Alone by Gender, 2006 - 2010**

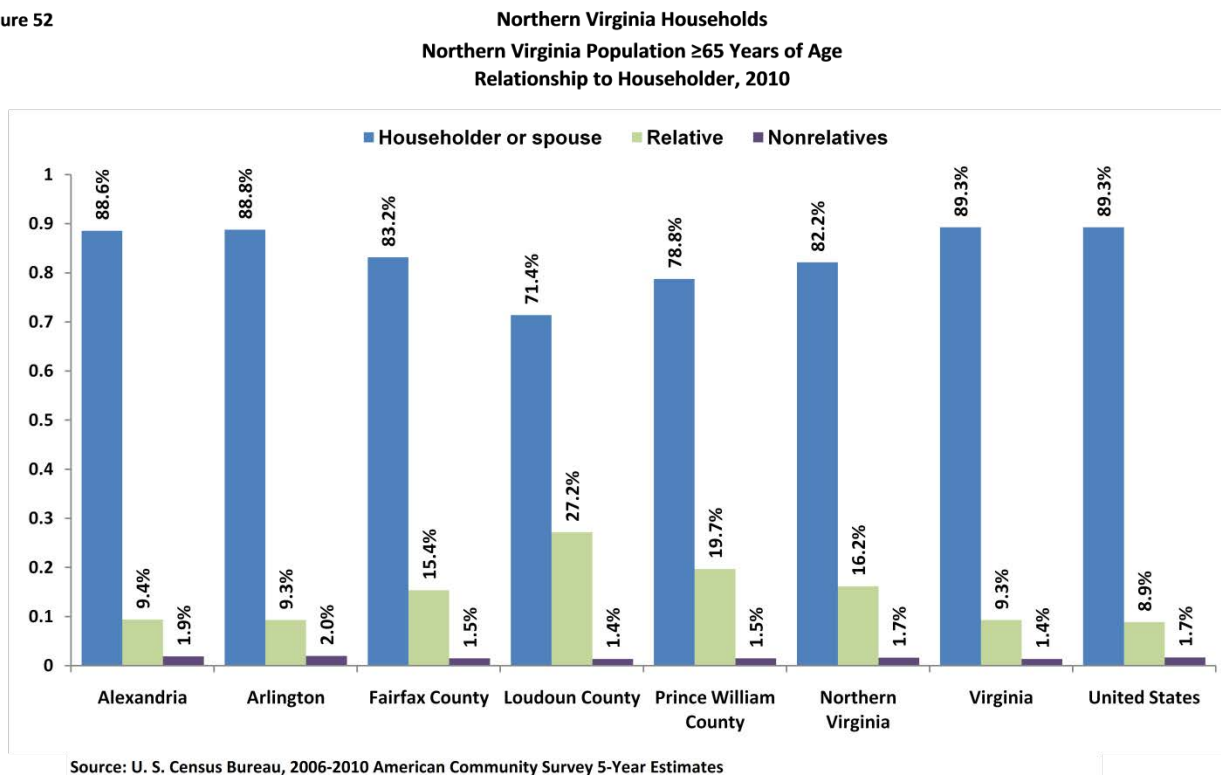


Source: U.S. Census Bureau, 2006-2010 American Community Survey; Calculations HSAHV, 2012.  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

Those ≥ 65 years of age are most likely to live with their spouse or alone. About 82% of older Northern Virginian households are either a single member household or a householder and a spouse (Figure 52). This is substantially lower than Virginia statewide and national percentages, both of which are nearly 90%.



Figure 52



Relatively large percentages of older Northern Virginians live with a relative other than a spouse. More than 16% of older Northern Virginians live with relatives other than a spouse. The percentage of older Northern Virginia residents living in extended families is nearly twice the Virginia and national levels.

The number of older residents living in extended families is particularly high in Loudoun and Prince William Counties. More than 27% of older Loudoun County residents live in an extended family arrangement. These differences reflect principally the larger number of immigrant families in the region. The percentage of older residents living with nonrelatives, less than 2% in recent years, does not vary significantly from national and statewide levels.

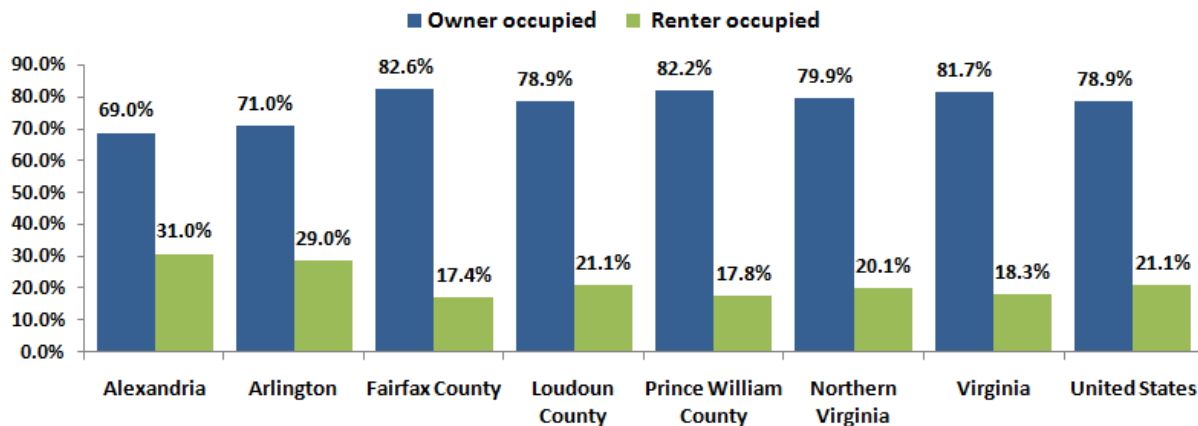
## 2. Home Ownership

Home ownership may be an important factor is encouraging (and enabling) older residents to “age in place”. Older householders in jurisdictions near the District of Columbia, Alexandria and Arlington, have higher home ownership costs and the lower rates of home ownership, 69% and 71% respectively, than elsewhere in the region (Figure 53). Home ownership percentages among older residents of Fairfax, Loudoun and Prince William counties approximate the national rate, about 79%.



Figure 53

### Northern Virginia Households: Householder $\geq 65$ Years of Age Home Ownership

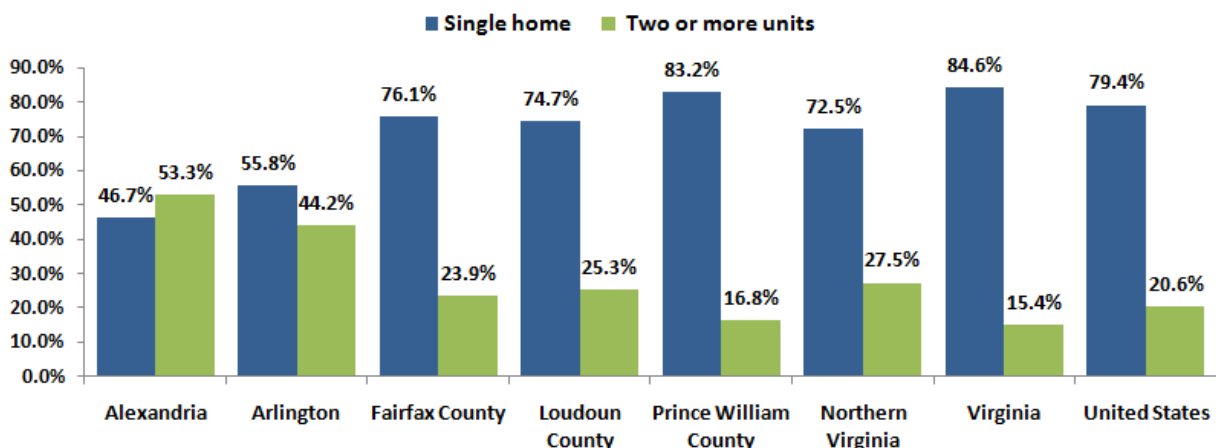


Source: 2006-2010 American Community Survey 5-Year Estimates; Calculations HSAHV, 2012.  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

Reflecting higher housing costs in Alexandria and Arlington and the urban character of these jurisdictions, substantially higher percentages of older residents of these jurisdictions live in multiunit housing (Figure 54).

Figure 54

### Northern Virginia Households: Householders $\geq 65$ Years of Age Householder by Type of Housing



Source: 2006-2010 American Community Survey 5-Year Estimates; Calculations HSAHV, 2012.  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

## 3. Assisted Living Services

Assisted living refers to living arrangements (housing options) that include support services which permit the disabled and older adults to enjoy a lifestyle with as much independence, comfort and



safety as possible. Assisted living arrangements usually provide 24-hour support that includes at a minimum housekeeping, meal preparation, and assistance with the activities of daily living. The intent is to satisfy the physical, behavioral, and social needs of residents in a monitored environment that facilitates autonomy, independence and dignity.

Demand for and reliance on assisted living services is increasing rapidly. Both demand and capacity have more than doubled over the last two decades. There are now 88 licensed assisted living facilities in Northern Virginia.<sup>40</sup> These facilities have 6,818 residential units. They range in size from 8 to 500 residential units. About 21% of Virginia's assisted living facility capacity is located in Northern Virginia. More than 5,000 older Virginians, between 2% and 3% of the older population, now reside in assisted living facilities.

Assisted living facilities do not provide medical care, but they do offer health related services that help thousands of older Northern Virginians maintain their health and avoid placement in a nursing home or another medical care facility. Much of the reduction in nursing use rates over the last two decades reflects the substitution of assisted living services for nursing home care.

Though reliance on assisted living services is growing, access is limited. Unlike hospital, nursing home, and home care services, there is no federal support for assisted living services. Neither Medicare nor Medicaid cover assisted living facilities. Those needing assisted living facility services must pay from private funds. The current cost of assisted living facility residence in Northern Virginia ranges from about \$3,000 per month to more than \$7,700 per month. The regional average is about \$4,800 month, or about \$57,000 per year.<sup>41</sup> These costs are well beyond the means of thousands of older Northern Virginians who would benefit for the service.

Limited affordability of assisted living services by those who would benefit most is a recognized, longstanding problem. The Virginia Department of Social Services administers a grant program which provides "auxiliary grants" to help pay for assisted living facility services for a limited number of poor disabled adults and older adults who qualify for assistance.

Resource limitations and restrictive eligibility criteria limited the value of the program. The qualifying income level and maximum payment level for Northern Virginia residents is about \$1,300 per month. This is between one-fourth and one-third of the average cost. Consequently, only 493 Northern Virginia residents receive Auxiliary Grant benefits, only 198 of these are 65 years of age or older. The majority of older Northern Virginia who do obtain auxiliary grant is placed outside the region. Many are placed in the Richmond area where costs are lower and a larger number of assisted living facilities admit grant recipients.



## Section VI

### Disability, Social Isolation

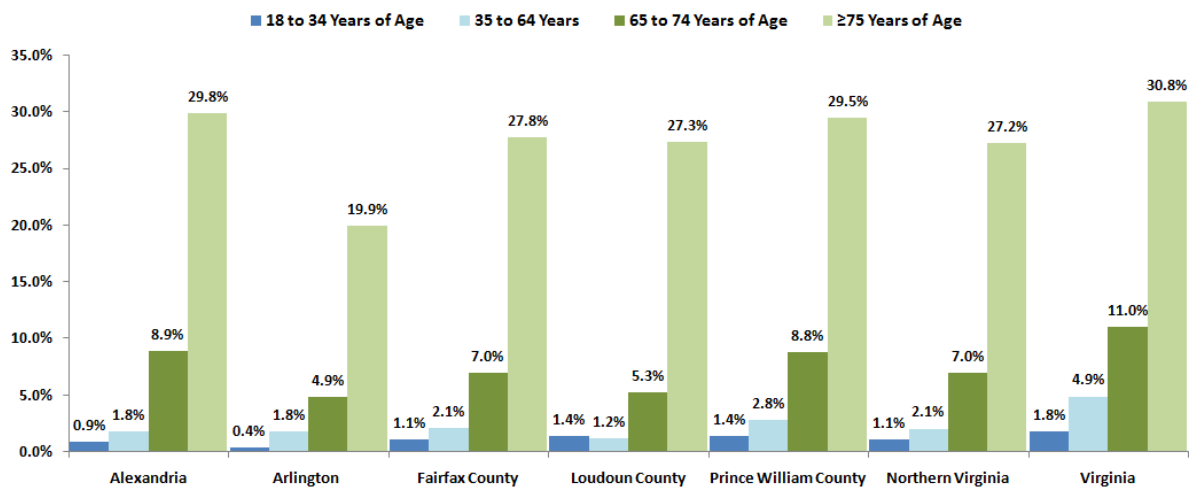
#### 1. Disability

Physical and mental disabilities are major health confronting older populations. Most disabilities among older adults result from deteriorating chronic conditions and injury, notably from strokes and fractures resulting from falls. Social, economic, health and related effects of physical and mental disability usually extend well beyond the person immediately at risk, often affecting both immediate and extended families for the duration of the condition.

Disability increases with age, particularly among older populations (Figure 55). In addition, it is common to find those with a disability to have more than one disabling condition or injury. During the three-year period 2008 - 2010, for example, the percentage of the older Northern Virginia population with one disabling condition increased from 10.8% for those 65-74 years of age to 17.5% for those  $\geq 75$  years of age, an increase of more than 60%.

Figure 55

**Disability**  
Percent of Northern Virginia Population  $\geq 18$  Years of Age with Two or More Types of Disability by Age Group



Source: U.S. Census, American Community Survey 2008 - 2010

(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

The percentage of the older population with multiple disabilities (two or more) increases even more sharply with age. Between 2008 and 2010, about 7% of Northern Virginians 65 to 74 years of age had two or more disabilities. The percentage increased nearly fourfold, to 27.2%, for those  $\geq 75$  years of age (Figure 55).

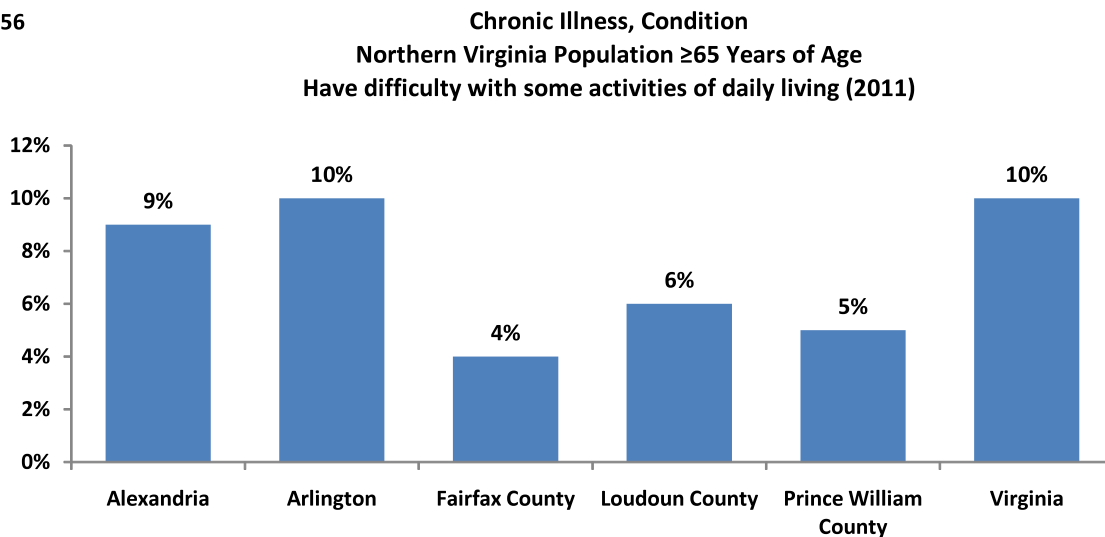
These conditions and circumstances help produce environments in which older resident with disabilities are:



- More likely to require emergency and inpatient hospital care,
- More likely to require inpatient rehabilitation, nursing home, and home health care ,
- At greater risk of maltreatment and abuse because of social isolation, dependency on care givers, and limited social interaction,
- Much more likely to encounter recurring limitations on activities of daily living.

In the age ready indicators benchmark survey conducted in 2011 about 6% of older Northern Virginians, nearly 12,000 individuals, report having difficulty with some activities of daily living (Figure 56). More than one-third of those  $\geq 65$  years of age indicated that they are limited in some activities because of a disability.

Figure 56



Source: Old Dominion Partnership, 2011 Virginia Age Ready Indicators Benchmark Survey, November 2011  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

About 1.5% of the older population reports having specific mental health conditions such as serious memory problems, Alzheimer's disease, and dementia.<sup>42</sup> About 8%, of those  $\geq 65$  years of age (more than 15,000 individuals) report having an ongoing emotional or psychiatric condition. More than two-thirds (69%) of those with these conditions report they obtained treatment for their problem within the previous six months. It is noteworthy that though the percentage of the older Northern Virginians with emotional and psychiatric problems is about 20% less than the statewide rate, the treatment rate for these conditions in Northern Virginia is nearly 40% higher than the treatment rate statewide.

Nearly 18% of older Northern Virginians report having a health problem or physical limitation that necessitates the use of special support equipment. This compares with about 20 of the older population statewide.

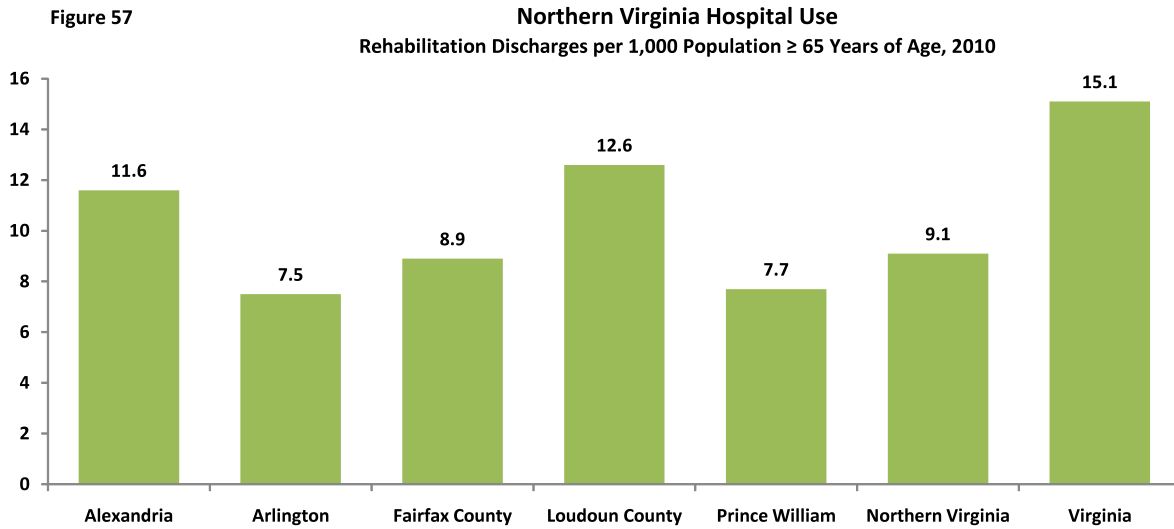
Disability among older Northern Virginians is highly correlated with low income and poverty. Between 2008 and 2010 nearly 9,000 older residents had income below the federal poverty level, for a poverty rate of about 5.0%.<sup>43</sup> Of these, 4,300 had at least one disability.



The poverty rate among older Northern Virginians without a disability was 3.6% compared with 8.4% for those with a disability. Thus, the poverty rate among older Northern Virginians with a disability was 2.3 times higher than among older residents without a disability.

Nearly half (48%) of older Northern Virginians with income below the federal poverty level has one or more disability. This population as a matter of course has much higher medical and social support costs than older Northern Virginians without disabilities.

Nearly 1,500 older Northern Virginians require inpatient hospital rehabilitation services each year. The large majority of these are for treatment of stroke and of complex fractures resulting from falls and other injuries. The Northern Virginia inpatient hospitalization rate for acute care rehabilitation is substantially less, more than 40% lower, than the Virginia and national rates (Figure 57).



Source: U.S. Census, 2010; VHI patient level data files, 2010.

(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

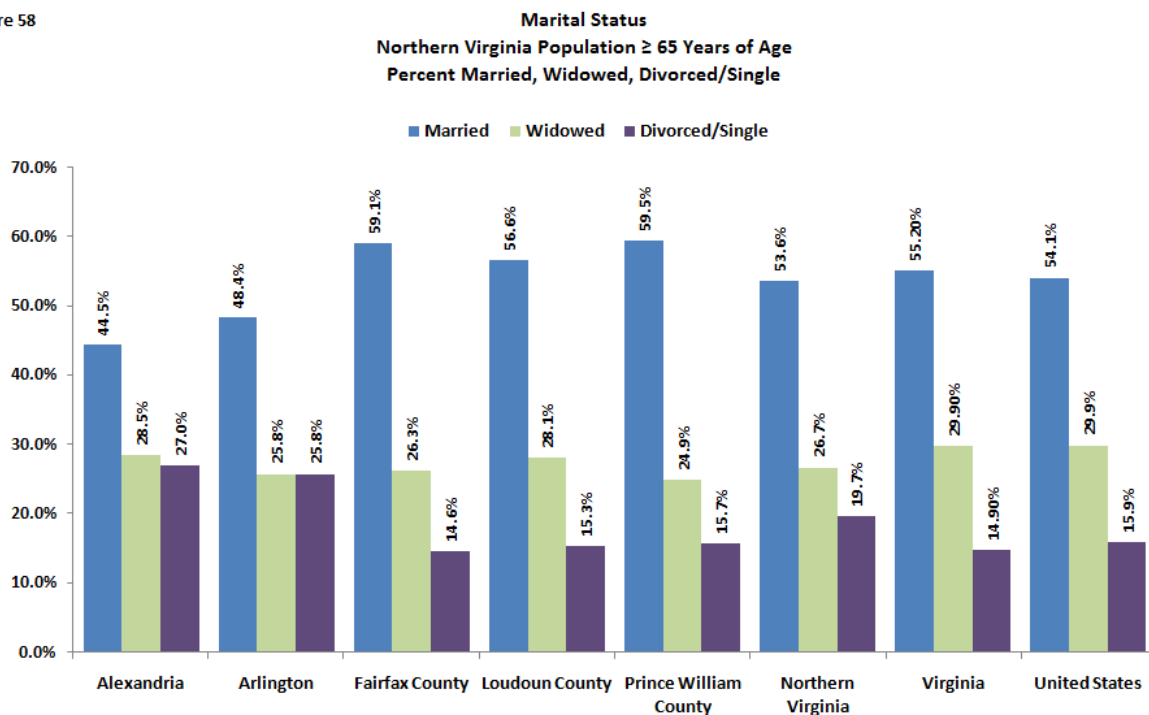
Within the region, inpatient rehabilitation hospitalization rates are much higher in Alexandria and Loudoun County than elsewhere. Though relatively high compared with rates elsewhere in the region, the higher Alexandria and Loudoun County rates are well below rates statewide and nationally.

## 2. *Marital Status*

About half of older Northern Virginians are married. Though the percentages of older Northern Virginians who are divorced is marginally higher than statewide and nationally, the differences in the numbers of divorced/single or widowed residents are not great enough to suggest increased social isolation as a result of lower marriage rates (Figure 58).



Figure 58



Source: U. S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

Consistent with their urban character, Arlington and Alexandria have smaller percentages of married residents 65 years of age and older and higher percentages of divorced older residents.

### 3. *Linguistic Isolation*

Northern Virginia has a large immigrant population, with relatively high percentages of foreign born, naturalized, and non citizen residents. The percentage of the population that is foreign born is about twice the national percentage and about 2.5 times the state rate. Many of these residents do not speak English well. They are likely to have difficulty in obtaining needed services and finding employment.

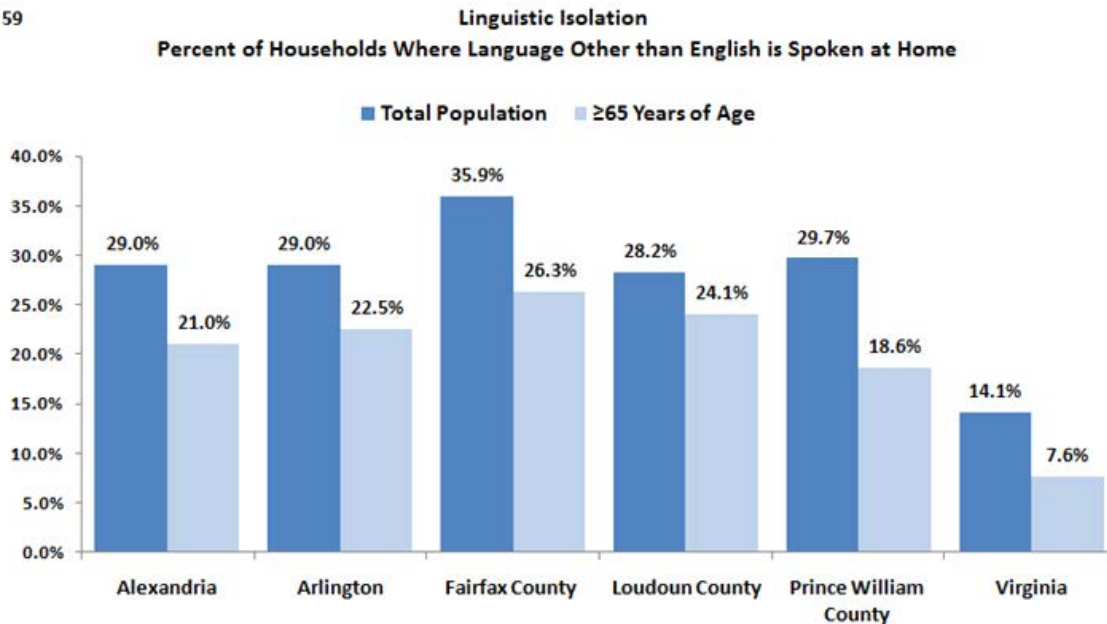
Spanish is the language most commonly spoken in households where English is not the principal language. Although the percentage of households speaking languages other than English does not vary significantly regionally, the principal non-English languages spoken vary considerably among jurisdictions. Spanish speakers are disproportionately located in Prince William County, Arlington, and Alexandria. Those speaking Asian languages are disproportionately located in Fairfax and Loudoun counties.

About one-third of Northern Virginia households commonly speak a language other than English. This is more than twice the percentage statewide and nationally (Figure 59). The difference is even greater for older households. About one-fourth of older households use a language other than English at home compared with less than 8% statewide.



A large percentage of older Northern Virginia households qualify as “linguistically isolated”, households that have difficulty communicating and functioning normally in English. Nearly 14% of Northern Virginia older households are linguistically isolated. This is nearly three times the Virginia statewide and national rates.

Figure 59



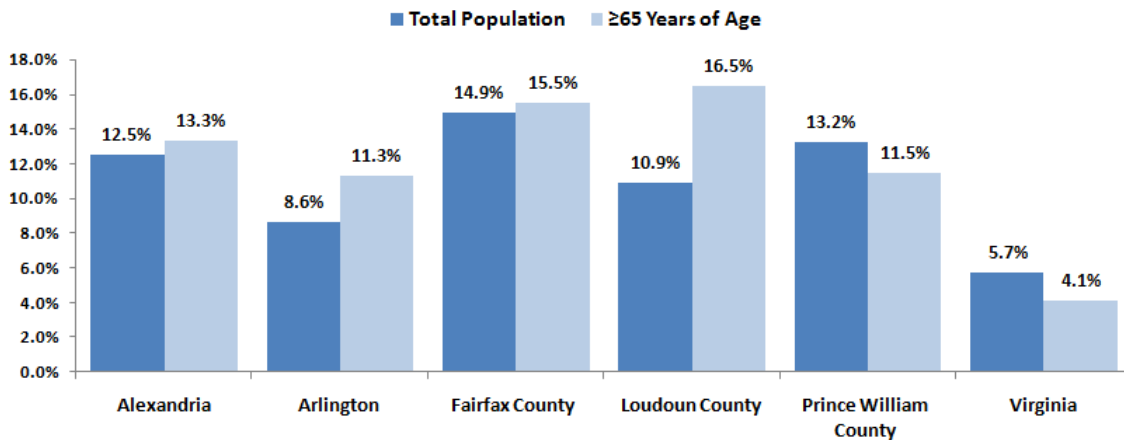
Source: U.S. Census Bureau, 2006-2010 American Community Survey  
(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

More strikingly, contrary to circumstances elsewhere, a disproportionately large percentage of linguistically isolated households in Northern Virginia are households with members  $\geq 65$  years of age. Contrary to experience elsewhere, the percentage of linguistically isolated households among older Northern Virginia is higher than among households without members  $\geq 65$  years of age. Only Prince William County, which has one of the region’s higher percentages of linguistically isolated populations, has a lower percentage of linguistically older households than among nonelderly households (Exhibit 60).



Figure 60

**Linguistic Isolation**  
Percent of Households Where English is Spoken Less than "Very Well"



Source: U.S. Census Bureau, 2006-2010 American Community Survey

(Fairfax County includes Falls Church & Fairfax City; Prince William County includes Manassas & Manassas Park)

More than 25,000 older Northern Virginians live in linguistically isolated households. The larger numbers of older households that qualify as linguistically isolated are in Fairfax and Prince William counties. All Northern Virginia jurisdictions have percentages of linguistically isolated households that are more than twice the percentages found statewide or nationally.



## Notes

<sup>1</sup> Population Census, 2010, U. S. Census Bureau, 2012. See Tables in Appendix A: Population Aging for detailed Northern Virginia population data and trends.

<sup>2</sup> The Virginia Employment Commission projects a Northern Virginia population of 2,850,391 in 2030. This projection will be updated, and likely increased marginally, in 2013.

<sup>3</sup> Comparison of Northern Virginia and Virginia statewide projected changes in the older population over the next two decades results in similar patterns and differences.

<sup>4</sup> There is some evidence that worldwide the primary sex ratio may be closer to 107 males to 100 females at birth. Whatever the fertility and birth ratios, absent imposed constraints, the ratios trend to equalization at maturity and to reflect superior female survival with age.

<sup>5</sup> Longevity increases with age. Those reaching age 65 years in 2012 were born in 1947, the second year of the “baby boom” age cohort, the large number of children born between 1946 and 1964. Life expectancy at birth among those born that year in the U.S. was 64.4 years for males and 69.7 years for females. For those surviving to 65 years of age (in 2012), females are expected, on average, to live an additional 19.8 years and males an additional 17.1 years. Thus, the life expectancy for survivors to age 65 is higher than at birth. It is also higher than the estimated life expectancy of those born recently (2010), 75.7 for males and 80.8 for females. (U. S. Census Bureau, *The 2012 Statistical Abstract: the National Data Book*, Table 104, 2012.)

<sup>6</sup> Hispanics are not separately identified in these data. They are included in the racial categories with which they self identify. Most Hispanics are included in the White population count. A smaller number are included in the Black population count.

<sup>7</sup> A population’s total dependency rate is defined as the ratio of the population aged 0-14 years and more than 65 years of age to the remainder of the population, those 15 to 64 years of age.

<sup>8</sup> As used here, the broad term economic insecurity refers to circumstances where individuals and households are forced to choose between competing essential personal and household needs. Many of the financially insecure routinely face the dilemma of allocating insufficient income among food, housing, medical, transportation, and utility expenses.

<sup>9</sup> The indices referenced, which measure changes in economic stability and security, are the Senior Financial Stability Index and the Senior Financial Security Index developed at the Institute on Assets and Social Policy, a research institute at the Heller School for Social Policy and Management at *Brandeis University*. See Tatjana Meschede, Laura Sullivan, Thomas Shapiro. From Bad to Worse: Senior Economic Insecurity on the Rise, Research and Policy Brief, July 2011, IASP, Brandeis University. Available at: <http://iasp.brandeis.edu/pdfs>. This and a number of related IASP research reports were last accessed in May 2012.

<sup>10</sup> Mean and median are terms used to describe statistical distributions. The mean value of set of numbers is the mathematical average of all the values. It is calculated by adding all of the values of all the terms and dividing the sum of those values by the number of terms.

The median value of a set of numbers is the value of the term in the middle of the set of numbers considered. It is the midpoint of the range numbers that are arranged in order of value. If the number of terms is even, then the median is the average of the two terms in the middle. The number of terms having values greater than or equal to the median it is the same as the number of terms having values less than or equal to it.

<sup>11</sup> Data for Fairfax County includes Fairfax City and Falls Church residents. Similarly, data describing Prince William County includes Manassas and Manassas Park residents.

<sup>12</sup> Unless otherwise indicated, Virginia and national mean calculations include Northern Virginia data in their base populations. Thus the differential between Northern Virginia jurisdictions and Virginia statewide understates the difference somewhat. The underestimation is in the direction of the difference. Northern Virginia represents about 29% of the Virginia population. This consideration does not affect the Northern Virginia/U.S. differential materially. Northern Virginia represents less than 1% of the U. S. population.

<sup>13</sup> Qualifying persons may choose to begin accepting social security payments as early as 62 years of age or as late as 70 years of age. Those who choose to accept benefits before the eligibility age for receiving full benefits receive reduced payments over the rest of their lives. The age at which a qualifying person becomes eligible to receive social security payments is increasing.



<sup>14</sup> The current poverty measure was established more than 40 years ago. It is based on research suggesting that families spend about one-third of their incomes on food. The official federal poverty level was set at three times the average cost of food. Since the 1960s the FPL has been adjusted annually for inflation, with no change to the base rate or underlying assumptions. Many argue that failure to update the FPL for changes in the cost of living results in people who are considered poor today being much poorer compared with the general population that those considered poor when the FPL was established. Currently, the FPL is less than 30% of the median household income, compared with nearly 50% of the median when it was established.

<sup>15</sup> As used here, the terms “enrollment” and “participation” in the food stamp program are used interchangeably.

<sup>16</sup> A five point scale was used in this survey: Poor (1), Fair (2), Good (3), Very Good (4), and Excellent (5).

<sup>17</sup> Older Dominion Partnership, 2011 *Virginia Age Ready Indicators Benchmark Survey*, November 2011.

<sup>18</sup> See Virginia Atlas of Community Health, Adult Health Risk Profile (2010 Synthetic Estimates), 2012.

<sup>19</sup> U. S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2010.

<sup>20</sup> U. S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, 2010. The examinations include sigmoidoscopies (visual examination of the interior of the rectum and part of the large intestine) and full colonoscopies (visual examination of the rectum and entire large intestine).

<sup>21</sup> The debate centers on the value and reliability of the prostate-specific antigen blood test as an indicator of the presence of cancer. See U.S.DHSS Preventive Services Task Force report, 2010.

<sup>22</sup> Chronic disease refers to health conditions and problems of more than three months duration, that usually are not subject to cure or eradication, and that must be monitored and managed to prevent or minimize negative health outcomes. Common chronic diseases and conditions include, but are not limited to, diabetes, cardiovascular disease, asthma, stroke, arthritis, psychoses, and hypertension.

<sup>23</sup> *Living Well with Chronic Illness: A Call for Public Health Action*, National Academy of Sciences, 2012.

<sup>24</sup> See age and disease specific data in Appendix C Charts, Appendices.

<sup>25</sup> Excluding the atypical Northern Virginia from the Virginia statewide data, the “other” Virginia discharge rate was 104 discharges per 1,000 persons in 2010 rather than the 91 discharges per 1,000 shown in Exhibit 37.

<sup>26</sup> The 2010 Virginia rate for those  $\geq 65$  years of age excluding Northern Virginia residents was 302 discharges per 1,000 persons compared with 283 discharges per 1,000 when lower use Northern Virginia older residents are included in the calculation.

<sup>27</sup> The 2010 Virginia rate for those  $\geq 85$  years of age excluding Northern Virginia residents was 533 discharges per 1,000 persons compared with 515 discharges per 1,000 when lower use Northern Virginia older residents are included in the calculation.

<sup>28</sup> These discharges were for the leading 12 diagnoses and conditions commonly referred to as ambulatory care sensitive conditions.

<sup>29</sup> See CMS, Hospital Compare at <https://data.medicare.gov/browse?tags=hospital+compare>.

<sup>30</sup> The same pattern holds for Medicare patient hospital discharges for other conditions and diagnoses.

<sup>31</sup> As might be expected, the percentage increases significantly (to about 65%) for those admitted on weekends.

“Patients Admitted on Weekends wait for Major Procedures,” *Characteristics of Weekday and Weekend Hospital Admission*, AHRQ, March, 2010.

<sup>32</sup> Agency for Healthcare Research and Quality, *Emergency Department Visits for Adults in Community Hospitals, 2008*; CMS, *Medicare Data for the Geographic Variation Public Use File*, July 2012, p. 21.

<sup>33</sup> Older Dominion Partnership, 2011 *Virginia Age Ready Indicators Benchmark Survey*, November 2011.

<sup>34</sup> This calculation excludes three small population zip codes with unusually low rates as “outliers”.

<sup>35</sup> Emergency service capacity at all Northern Virginia hospitals has been expanded and modernized within the last decade. There is adequate capacity to meet current and projected demand in a timely and effective manner.

<sup>36</sup> U.S. Census Bureau, 2008-2010 American Community Survey, B27006: Medicare Coverage by Sex by Age.

<sup>37</sup> Preliminary 2011 licensing data suggests that moderation in demand is continuing. See Virginian Health Information nursing care facility annual licensure survey data for 2011.

<sup>38</sup> Northern Virginia has a larger number and percentage of continuing care retirement communities, which have residential, assisted living, and nursing home units, than any other region of Virginia.

<sup>39</sup> Centers for Medicare and Medicaid Services, Medicare and Medicaid Statistical Supplement 2011, Table 7.3.

<sup>40</sup> Assisted living facilities (ALFs) are licensed by the Virginia Department of Social Services. Unlike nursing homes, assisted living facilities do not provide medical services and capacity is not controlled other than by local jurisdictional zoning and land use planning. There are no standard federal regulations that apply to assisted living services and facilities.



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<sup>41</sup> *MetLife Market Survey of Nursing Home, Assisted Living, Adult Day Services, and Home Care Costs*, Metropolitan Life, 2012.

<sup>42</sup> Older Dominion Partnership, 2011 *Virginia Age Ready Indicators Benchmark Survey*, November 2011.

<sup>43</sup> U. S. Census Bureau, 2011.