Community Health Needs Assessment

Prepared for
INOVA FAIRFAX MEDICAL CAMPUS

By
VERITÉ HEALTHCARE CONSULTING, LLC

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VERITÉ HEALTHCARE CONSULTING

ABOUT VERITÉ HEALTHCARE CONSULTING

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Alexandria, Virginia. The firm serves as a national resource that helps hospitals conduct community health needs assessments (CHNAs) and develop implementation strategies that address priority needs. The firm also helps hospital associations and policy makers with community benefit reporting, planning, program assessment, and policy and guidelines development. Verité is a recognized, national thought leader in community benefit and in the evolving expectations that tax-exempt healthcare organizations are being required to meet.

The CHNA prepared for Inova Fairfax Medical Campus was directed by the firm's president and managed by a senior-level consultant. Associates and research analysts supported the work. The firm's president, as well as all senior-level consultants and associates, hold graduate degrees in relevant fields.

More information on the firm and its qualifications can be found at www.VeriteConsulting.com

Verité Healthcare Consulting's work reflects fundamental concerns regarding the health of vulnerable people and the organizations that serve them

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INTRODUCTION

This community health needs assessment (CHNA) was conducted by Inova Fairfax Medical Campus (Inova Fairfax or the hospital) because the hospital wants to understand better community health needs and to develop an effective implementation strategy to address priority needs. The hospital also has assessed community health needs to respond to community benefit regulatory requirements.

Federal regulations require that tax-exempt hospitals provide and report community benefits to demonstrate that they merit exemption from taxation. As specified in the instructions to IRS Form 990, Schedule H, community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs.

Community benefit activities or programs seek to achieve objectives, including:

- improving access to health services,
- enhancing public health,
- advancing increased general knowledge, and
- relief of a government burden to improve health.[1]

To be reported, community need for the activity or program must be established. Need can be established by conducting a community health needs assessment.

The 2010 Patient Protection and Affordable Care Act (PPACA) requires each tax-exempt hospital to "conduct a [CHNA] every three years and adopt an implementation strategy to meet the community health needs identified through such assessment."[2]

CHNAs seek to identify priority health status and access issues for particular geographic areas and populations by focusing on the following questions:

- ***Who*** in the community is most vulnerable in terms of health status or access to care?
- ***What*** are the unique health status and/or access needs for these populations?
- ***Where*** do these people live in the community?
- ***Why*** are these problems present?

The question of ***how*** the organization can best use its limited charitable resources to address priority needs will be the subject of the hospital's Implementation Strategy.

This assessment considers multiple data sources, including secondary data (regarding demographics, health status indicators, and measures of health care access), assessments prepared by other organizations in recent years, and primary data derived from a community survey and from interviews with persons who represent the broad interests of the community, including those with expertise in public health.

The following topics and data are assessed in this report:

- Demographics, e.g., numbers and locations of vulnerable people;

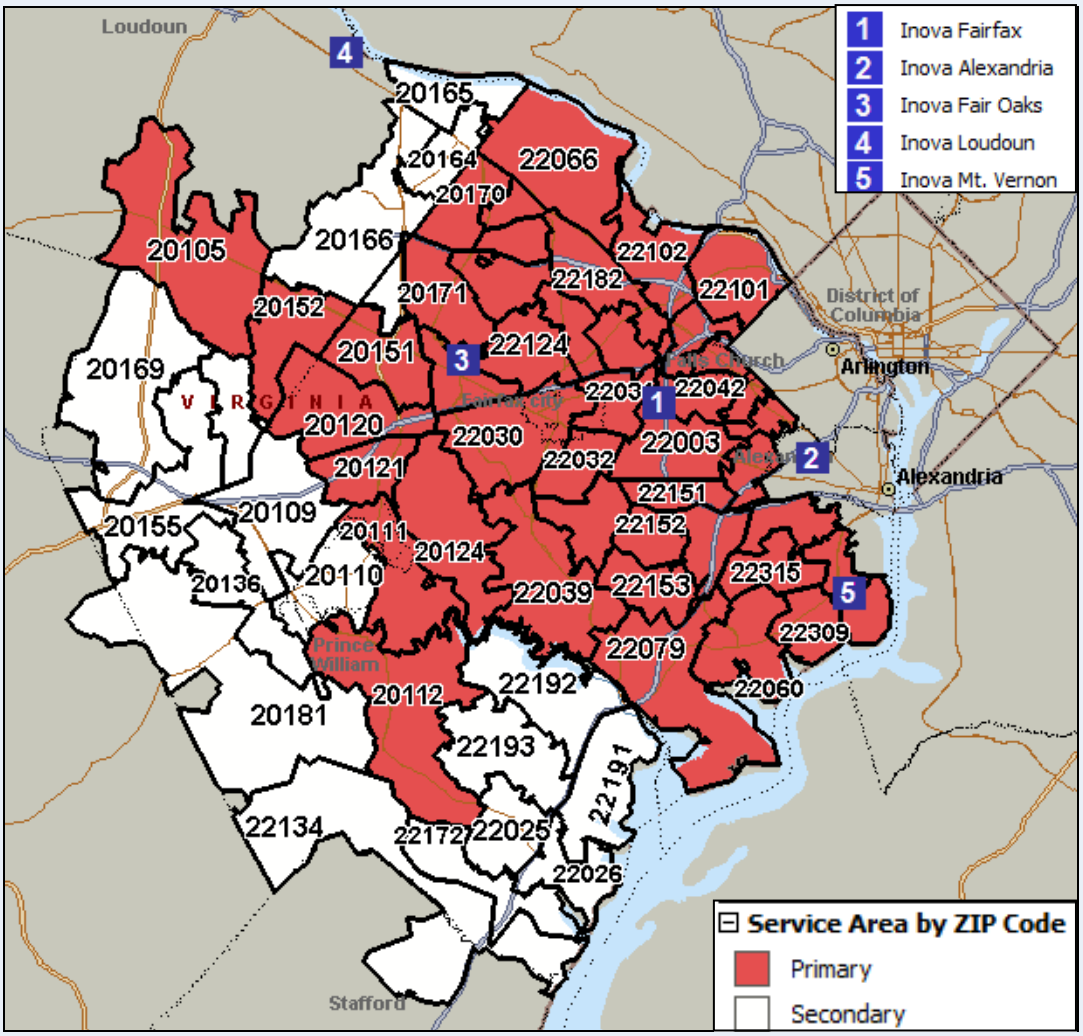
[1] Instructions for IRS Form 990, Schedule H, 2012.

[2] Patient Protection and Affordable Care Act.

- Economic issues, e.g., poverty and unemployment rates, and impacts of state or local budget changes;
- Community issues, e.g., homelessness, housing, environmental concerns, crime, and availability of social services;
- Health status indicators, e.g. morbidity rates for various diseases and conditions, and mortality rates for leading causes of death;
- Health access indicators, e.g., uninsurance rates, discharges for ambulatory care sensitive conditions (ACSC), and use of emergency departments for non-emergent care;
- Health disparities indicators; and
- Availability of healthcare facilities and resources.

The assessment identifies a prioritized list of community health needs. Inova Fairfax Medical Campus will be preparing an Implementation Strategy that describes how the hospital plans to address the identified needs.

EXECUTIVE SUMMARY



Inova Fairfax Medical Campus Community By the Numbers

- 64 ZIP codes in Fairfax, Loudoun, and Prince William counties and the cities of Falls Church and Manassas
- Estimated Population (2012): 1,673,930
- 69% of community population resides in the primary service area (2012)
- Population change (2013-2018):
  - Growth of 1% in primary service area and 3% in secondary service area
  - 7% increase in 65+ population
- Below VA average poverty rates, with pockets of low-income people across the community
- Growing diversity:
  - Rapidly growing Hispanic (or Latino) population
  - 41% non-White in 2013; 42% by 2018
- 8% of Inova Fairfax Medical Campus discharges for ambulatory care sensitive conditions (ACSC)

In general, the Inova Fairfax community benchmarks favorably on a variety of health indicators compared to national and Virginia averages. However, health status and access problems are present and this assessment seeks to identify the most pressing issues.

Fairfax County is comparatively wealthy, but problematic health disparities exist for low-income populations and racial and ethnic minorities.

Poverty and unemployment can create barriers to access (to health services, healthy food, and other necessities) and thus contribute to poor health. Although overall the community had lower poverty and unemployment rates than the U.S. average, unemployed, lower income, and uninsured people are in: Lincolnia/Bailey's Crossroad, Reston/Herndon, Manassas, and the Richmond Highway corridor. These areas are home to relatively high proportions of Black and Hispanic (or Latino) residents.

Parts of Loudoun County, Fairfax County, Manassas and Manassas Park Cities, and Prince William County contain federally-designated Medically Underserved Areas and Populations (MUAs/MUPs).

Virginia has enacted budget reductions that affect health and human service providers. These reductions affect children and youth services, aging and elderly services, mental health programs and services, health services for indigent and low-income populations, and public health departments.

Eight percent of Inova Fairfax Medical Campus discharges were found to be for ambulatory care sensitive conditions (ACSC) or potentially preventable if patients were accessing primary care resources at optimal rates. About half are for patients 65 years of age and older; the most common conditions for those patients were: congestive heart failure, chronic obstructive pulmonary disease, urinary tract infection, and bacterial pneumonia.

Priority Needs

Poor health status can result from a complex interaction of challenging social, economic, environmental, and behavioral factors combined with a lack of access to care. Addressing these "root" causes is an important way to improve a community's quality of life and to reduce mortality and morbidity.

The table that follows describes the health needs identified throughout the assessment as priorities in the community served by Inova Fairfax Medical Campus.

Access to Health and Human Services

- **Insufficient Collaboration and Coordination Among Organizations Providing Health and Social Services**

  Health needs in the community would be better addressed if collaboration among community-wide health care providers, facilities, and agencies providing health and social services were enhanced. Stakeholders expressed a need for comprehensive integration (e.g., primary care and mental health) and coordination of care across (e.g., primary care referrals to specialists) the community-wide system of services and providers. Effective communication and active relationships between these organizations would be beneficial, especially to vulnerable populations.

- **Insufficient Case/Care Management for Seniors - (Fairfax County, Fairfax City, Falls Church City)**

  Disease management and self-sufficiency education and assistance are needed for the senior population, particularly for those with mental health issues.

- **Lack of Affordable and Accessible Primary and Specialty Care and Insurance**

  Low-income and minority populations have difficulty accessing health care services and insurance. Clinics and other community organizations are struggling to meet growing demand. Access to specialty care is particularly problematic for Medicaid and uninsured patients.

- **Lack of Access to Preventive Care**

  Residents in Mt. Vernon South/Ft. Belvoir experience comparatively high rates of ambulatory care sensitive admissions that could be avoided with improved access to primary and preventive care. Residents, especially low-income and uninsured people, are not accessing these services due to high cost, lack of convenience, or awareness of available services.

- **Lack of Transportation to Health and Human Services**

  Community residents experience difficulty accessing services due to gaps in the public transportation system and traffic congestion.

- **Language Barriers and Need for Additional Culturally Competent Care Providers**

  Culturally competent health services and health system navigation services are needed as diversity increases.

Chronic Disease

- **High Rates of Cancer Incidence and Disparities in Cancer Mortality**

  Fairfax County, Fairfax City, and Falls Church City exhibit comparatively high rates of breast and ovarian cancer. Cancer mortality is comparatively high for the Other[3] (non-White, non-Black) population in Prince William County.

- **Disparities in Chronic Liver Disease and Cirrhosis Mortality**

  Chronic liver disease and cirrhosis mortality is comparatively high in the Other[3] (non-White, non-Black) population.

Dental Health

- **Lack of Access to Dental Care and Poor Dental Health Status**

  Additional, affordable dental care services are needed for low-income, uninsured, and undocumented adults to improve dental health outcomes.

Health Behaviors

- **Alcohol Abuse**

  Efforts to reduce alcohol misuse are needed due to comparatively high rates of heavy drinking.

- **High Rates of Smoking – (Manassas City and Manassas Park City)**

  Efforts to reduce the prevalence of smoking are needed, especially among adolescents, young adults, and lower-income populations.

[3] The "Other" population includes residents who identify as American Indian/Native American, Asian/Pacific Islander, two or more races, or some other race.

- **Unsafe Sex - (Manassas City and Manassas Park City)**

  Efforts to promote safe sex habits are needed in the cities of Fairfax, Manassas, and Manassas Park.

Maternal and Child Health

- **Disparities in Infant Health Outcomes**

  Services (including enhanced prenatal care in the first trimester in Prince William County, Manassas City, and Manassas Park City) are needed to reduce the ratios of Black to White infant mortality and Black to White low and very low birth weight infants.

Mental Health

- **Lack of Access to Mental Health Services and Poor Mental Health Status**

  Additional, comprehensive mental health services are needed to address the needs of children/adolescents, low-income and uninsured/underinsured residents, those suffering from stress, veterans, and persons with chronic/severe mental illness.

Morbidity and Mortality

- **Diet and Exercise-Related Issues**

  Poor diet and a lack of exercise contribute to poor health status in the community, particularly the prevalence of obesity/overweight and diabetes, as well as disparities in diabetes mortality.

- **High Rates of Communicable Diseases**

  The incidence of tuberculosis is above the Virginia average in the community as a whole. The percentage of residents living with HIV/AIDS is comparatively high in the cities of Fairfax, Falls Church, and Manassas. The percentage diagnosed with chlamydia is comparatively high in Fairfax and Falls Church cities.

- **High Rates of Lyme Disease – (Loudoun County)**

  Interventions are needed to respond to relatively high rates of Lyme disease in Loudoun County.

Physical Environment

- **Poor Air Quality**

  The community has comparatively high concentrations of particulate matter and ozone.

- **Poor Community Safety - (Manassas City and Manassas Park City)**

  Efforts are needed in Prince William County and in Falls Church, Manassas, and Manassas Park cities to address community safety issues.

Social and Economic Factors

- **Basic Needs Insecurity**

  The economic downturn, combined with a comparatively high cost of living, has led to difficulties accessing affordable food and shelter, especially for residents of Mt. Vernon South/Ft. Belvoir, Dale City/Dumfries/Quantico, and Manassas East. The economic downturn also has led to pockets of unemployment and poverty, as well as community concerns about homelessness in Loudoun and Prince William counties.

- **Lack of Health Education**

  Increased health education and awareness of existing services is needed in the community, particularly for children and families.

- **Poor Educational Achievement - (Manassas City and Manassas Park City)**

  High school graduation rates are comparatively low in Manassas and Manassas Park cities.

APPENDIX

METHODOLOGY

Analytic Methods

This Appendix begins by identifying the communities served by Inova Fairfax. Findings based on various quantitative analyses regarding health needs in those areas are discussed, followed by a review of health assessments conducted by other organizations in recent years.

The Appendix then presents information obtained from interviews with stakeholders who represent the broad interests of the community, including public health officials and experts, and Inova Fairfax-affiliated clinicians, administrators, and staff. Interviews were conducted from March through August of 2012. The assessment also considers information obtained from a public community survey.

Identifying priority community health needs involves benchmarking and trend analysis. Statistics for several health status and health access indicators are analyzed and compared to state-wide and national benchmarks or goals. The assessment considers multiple data sources, including indicators from local, state, and federal agencies. Including multiple data sources and stakeholder views is important when assessing the level of consensus that exists regarding community health needs. If alternative data sources including interviews support similar conclusions, then confidence is increased regarding the most problematic health needs in a community.

Prioritization Process and Criteria

Verité applied a ranking methodology to help prioritize the community health needs identified by the assessment. Verité listed the identified health issues and assigned to each a severity score based on the extent to which indicators exceeded Virginia or U.S. averages. An average severity score was calculated for each category of data (secondary data, previous assessments, interviews, and survey data) to account for the number of sources that measured each health issue. These averages were assigned a weight: 40 percent, 10 percent, 40 percent, and 10 percent, respectively. A final score was calculated by summing the weighted averages. **Exhibit 1** illustrates this process for three example indicators.

Exhibit 1: Example Prioritization Process by Data Source and Indicator, Fairfax County

Data Source	Alcohol Use	Lyme Disease	Language Barriers
County Health Rankings	2	-	-
Community Health Status Indicators Project	-	-	-
Virginia Public Health Data	-	-	-
Healthy People 2010	-	-	-
Behavioral Risk Factor Surveillance Survey	2	-	-
U.S. Census	-	-	2
Secondary Data - Weighted Average (40%)	**0.8**	-	**0.8**
Previous Assessments	-	2	-
Previous Assessments - Weighted Average (10%)	-	**0.2**	**-**
Interviews	1	2	2
Interviews - Weighted Average (40%)	**0.4**	**0.8**	**0.8**
Community Survey	-	0	2
Community Survey - Weighted Average (10%)	**-**	**0.0**	**0.2**
Final Score	**1.2**	**1.0**	**1.8**

Source: Verité Analysis, 2012.

The methodology takes into account severity scores for each health issue and the number of sources that measure each issue.

Information Gaps

No information gaps have affected Inova Fairfax's ability to reach reasonable conclusions regarding priority community health needs.

Collaborating Organizations

For this assessment, Inova Fairfax Medical Campus collaborated with Inova Alexandria Hospital, Inova Fair Oaks Hospital, Inova Loudoun Hospital, and Inova Mt. Vernon Hospital.

DEFINITION OF COMMUNITY ASSESSED

This section identifies the community assessed by Inova Fairfax. Verité relied on Inova Fairfax's current service area definitions to identify the communities to be assessed. The definitions were based on the geographic origins of hospital discharges.

Inova Fairfax's community is comprised of 64 ZIP codes within 26 subregions that extend into (and overlap with) the counties of Fairfax, Loudoun, and Prince William and the cities of Falls Church and Manassas (**Exhibits 2 and 3**). The hospital is located in Falls Church (ZIP code 22042).

Exhibit 2: Community Population, 2012

Subregion	2012 Population*	Percent of Population 2012
Primary Service Area		
Fairfax County Subregions	**1,048,568**	**62.6%**
Annandale/North Springfield	67,032	4.0%
Centreville	71,817	4.3%
Chantilly	21,260	1.3%
Clifton/Fairfax Station	35,722	2.1%
East Fairfax 29/50 Corridor	73,904	4.4%
Fairfax City	49,121	2.9%
Franconia/Kingstowne	55,557	3.3%
GMU/Burke	68,703	4.1%
Lincolnia/Bailey's Crossroads	56,948	3.4%
Lorton/Newington	28,516	1.7%
McLean/Great Falls	64,440	3.8%
Mt. Vernon South/Ft. Belvoir	79,758	4.8%
Oakton/Fair Lakes/South Herndon	99,857	6.0%
Reston/Herndon	102,323	6.1%
Springfield	87,803	5.2%
Vienna	63,871	3.8%
West Falls Church	21,936	1.3%
Falls Church City Subregions	**14,589**	**0.9%**
West Falls Church	14,589	0.9%
Loudoun County Subregions	**33,970**	**2.0%**
South Riding/Aldie	33,970	2.0%
Prince William County Subregions	**61,939**	**3.7%**
Manassas East	61,939	3.7%
Primary Service Area Total	**1,159,161**	**69.2%**
Secondary Service Area		
Fairfax County Subregions		
Dulles International Airport	-	
Loudoun County Subregions	**95,127**	**5.7%**
Sterling/Dulles	95,127	5.7%
Manassas City Subregions	**43,326**	**2.6%**
Manassas West	43,326	2.6%
Prince William County Subregions	**376,411**	**22.5%**
Manassas West	40,458	2.4%
Gainesville/Haymarket/Bull Run	87,730	5.2%
Dale City/Dumfries/Quantico	129,754	7.8%
Woodbridge	55,493	3.3%
Lake Ridge/Occoquan	62,976	3.8%
Secondary Service Area Total	**514,864**	**30.8%**
Combined Service Area Total	**1,673,930**	**100.0%**

Source: The Metropolitan Washington Council of Governments, 2012.
*2012 projections based on Verité analysis of 2008 and 2013 population estimates.

The Inova Fairfax community included 1,673,930 residents in 2012

…

The majority (63%) of the community population resided in Fairfax County

In 2012, the Inova Fairfax community was estimated to have a population of approximately 1,674,000 persons. Approximately 69 percent of the population resided in the primary service area (**Exhibit 2**).

Some health indicators only are available at a county-wide or city-wide level of detail. When assessing these indicators, it is important to take into account the percentage of the total community population that resides in each jurisdiction. **Exhibit 3** shows that Inova Fairfax community ZIP codes accounted for 40 percent of Loudoun County's total population. Accordingly, caution should be used when assessing data available only for Loudoun County as a whole.

Exhibit 3: Community and Jurisdiction Population Overlap, 2012

Jurisdiction	Community Population*	Percent of Community Population	Total Jurisdiction Population*	Community Percent of Total Jurisdiction
Fairfax County	1,048,568	62.6%	1,083,557[4]	96.8%
Falls Church City	14,589	0.9%	11,577[4]	100.0%
Loudoun County	129,097	7.7%	320,160	40.3%
Manassas City	43,326	2.6%	36,626[4]	100.0%
Prince William County	438,350	26.2%	416,403[4]	100.0%
Total	**1,673,930**	**100.0%**	**1,868,322**	**89.6%**

Sources: The Metropolitan Washington Council of Governments, 2012, and U.S. Census Bureau, 2011.
* Jurisdiction population estimated were based on Verité analysis of data from the U.S. Census Bureau, American Community Survey, 5 Year Estimates 2006-2010. Community population estimates were retrieved from Inova Health System.
** For the assessment, Fairfax County includes Fairfax City; Prince William County includes Manassas Park City. Some county-level data for these jurisdictions are assessed independently.

The community was defined based on the geographic origins of Inova Fairfax inpatients. In 2010, approximately 72 percent of the hospital's inpatients originated from the primary service area and 68 percent from Fairfax County (**Exhibit 4**). The service area collectively accounted for 84 percent of the hospital's inpatient discharges.

The community definition was confirmed by examining the geographic origin of emergency department encounters. In 2010, nearly 82 percent of Inova Fairfax's emergency department visits originated from the primary and secondary service areas (**Exhibit 4**).

[4] Different data were used to calculate community and jurisdiction populations causing the populations of Falls Church City, Manassas City, and Prince William County as a whole to be reported as lower than the populations in the ZIP codes in those areas served by Inova Fairfax, and the population of Fairfax County to be reported as higher than the populations in the ZIP codes in Fairfax County served by Inova Fairfax. Inova Fairfax serves the entirety of Fairfax County, Falls Church City, Manassas City, and Prince William County

Exhibit 4: Inova Fairfax Inpatient Discharges and Emergency Department Visits, 2010

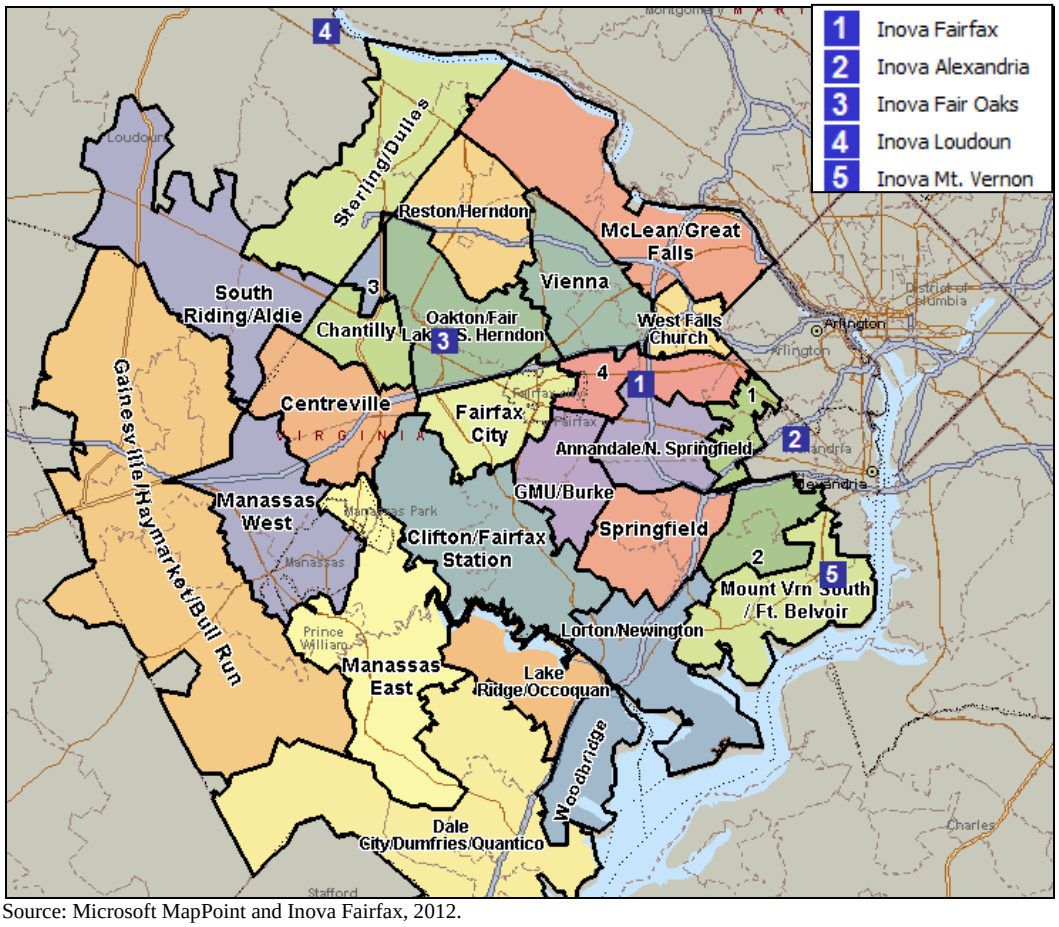
Jurisdiction	Percent of Inpatient Discharges	Percent of Emergency Department Visits
Primary Service Area		
Fairfax County	68.2%	70.8%
Falls Church City	0.8%	1.3%
Loudoun County	0.9%	0.5%
Prince William County	1.6%	1.0%
Primary Service Area Total	**71.5%**	**73.5%**
Secondary Service Area		
Fairfax County	-	-
Loudoun County	1.7%	0.9%
Manassas City	1.0%	0.7%
Prince William County	10.0%	6.7%
Secondary Service Area Total	**12.7%**	**8.3%**
Combined Service Areas Total	**84.2%**	**81.8%**
Other Areas	**15.8%**	**18.2%**
All Discharges	**42,246**	**103,386**

Sources: Health Systems Agency of Northern Virginia, 2011, and Emergency Department Data, 2011.

Fairfax County accounted for 68% of all Inova Fairfax inpatient discharges and 71% of all emergency department visits

Exhibit 5 presents a map that shows the ZIP codes that comprise each subregion.

Exhibit 5: Community Map by Subregion and ZIP Code*



Source: Microsoft MapPoint and Inova Fairfax, 2012.

*Subregion 1 is Lincolnia/Bailey's Crossroads, subregion 2 is Franconia/Kingstowne, subregion 3 is Dulles International Airport, and subregion 4 is East Fairfax 29/50 Corridor.

Fairfax, Loudoun, and Prince William counties and the cities of Falls Church and Manassas

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Estimated population 2012: 1,673,930

SECONDARY DATA ASSESSMENT

This section assesses secondary data regarding health needs in Inova Fairfax's community.

Demographics

Population change plays a determining role in the types of health and social services needed by communities. Overall, the population living in the community is expected to increase 7.6 percent between 2008 and 2013 and is expected to increase by another 1.8 percent between 2013 and 2018 (**Exhibit 6**).

Exhibit 6: Percent Change in Community Population by Subregion, 2008-2013 and 2013-2018

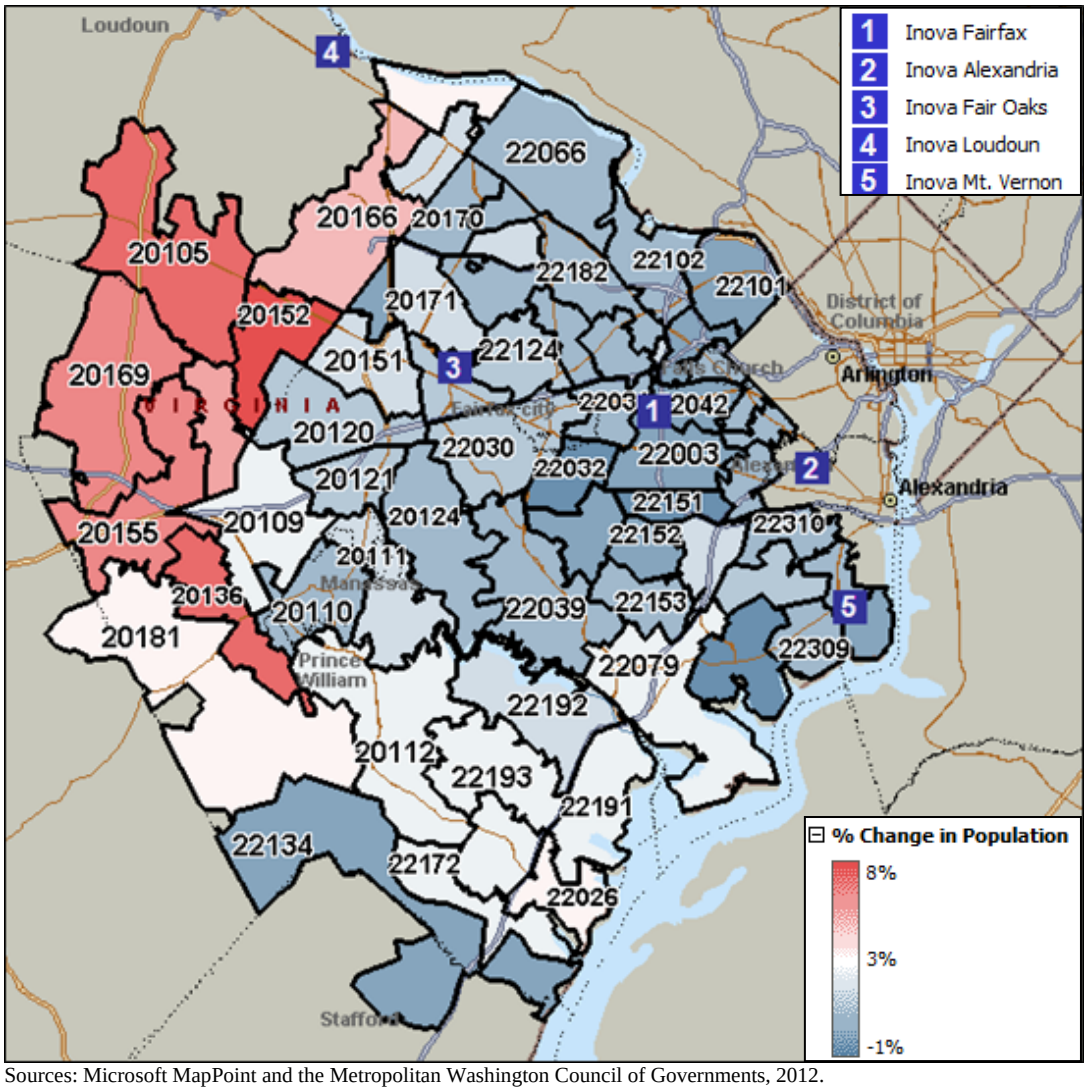
Subregion	Total Population			Percent Change in Population	
	2008	2013	2018	2008-2013	2013-2018
Primary Service Area					
Fairfax County Subregions	**1,023,372**	**1,055,083**	**1,063,944**	**3.1%**	**0.8%**
Annandale/North Springfield	67,682	66,871	66,787	-1.2%	-0.1%
Centreville	68,479	72,677	73,775	6.1%	1.5%
Chantilly	20,032	21,579	21,958	7.7%	1.8%
Clifton/Fairfax Station	34,863	35,940	36,286	3.1%	1.0%
East Fairfax 29/50 Corridor	72,937	74,148	74,503	1.7%	0.5%
Fairfax City	46,207	49,878	50,702	7.9%	1.7%
Franconia/Kingstowne	53,742	56,020	56,623	4.2%	1.1%
GMU/Burke	69,976	68,388	68,234	-2.3%	-0.2%
Lincolnia/Bailey's Crossroads	55,813	57,235	57,616	2.5%	0.7%
Lorton/Newington	25,497	29,325	30,222	15.0%	3.1%
McLean/Great Falls	64,141	64,515	64,704	0.6%	0.3%
Mt. Vernon South/Ft. Belvoir	79,134	79,915	80,204	1.0%	0.4%
Oakton/Fair Lakes/South Herndon	94,317	101,292	103,057	7.4%	1.7%
Reston/Herndon	99,563	103,025	104,003	3.5%	0.9%
Springfield	86,121	88,229	88,852	2.4%	0.7%
Vienna	62,692	64,169	64,564	2.4%	0.6%
West Falls Church	22,176	21,877	21,854	-1.3%	-0.1%
Falls Church City Subregions	**14,309**	**14,660**	**14,752**	**2.5%**	**0.6%**
West Falls Church	14,309	14,660	14,752	2.5%	0.6%
Loudoun County Subregions	**25,742**	**36,409**	**39,128**	**41.4%**	**7.5%**
South Riding/Aldie	25,742	36,409	39,128	41.4%	7.5%
Prince William County Subregions	**56,036**	**63,509**	**65,223**	**13.3%**	**2.7%**
Manassas East	56,036	63,509	65,223	13.3%	2.7%
Primary Service Area Total	**1,119,459**	**1,169,661**	**1,183,048**	**4.5%**	**1.1%**
Secondary Service Area					
Fairfax County Subregions					
Dulles International Airport	-	-	-	-	-
Loudoun County	**84,499**	**97,986**	**101,164**	**16.0%**	**3.2%**
Sterling/Dulles	84,499	97,986	101,164	16.0%	3.2%
Manassas City Subregions	**42,014**	**43,660**	**44,042**	**3.9%**	**0.9%**
Manassas West	42,014	43,660	44,042	3.9%	0.9%
Prince William County Subregions	**333,805**	**388,105**	**401,174**	**16.3%**	**3.4%**
Manassas West	36,720	41,450	42,535	12.9%	2.6%
Gainesville/Haymarket/Bull Run	69,634	92,946	98,627	33.5%	6.1%
Dale City/Dumfries/Quantico	119,064	132,573	135,945	11.3%	2.5%
Woodbridge	50,058	56,942	58,511	13.8%	2.8%
Lake Ridge/Occoquan	58,329	64,194	65,557	10.1%	2.1%
Secondary Service Area Total	**460,318**	**529,751**	**546,380**	**15.1%**	**3.1%**
Combined Service Areas Total	**1,579,777**	**1,699,412**	**1,729,428**	**7.6%**	**1.8%**

Source: The Metropolitan Washington Council of Governments, 2012.

The Northern Virginia area is growing at a faster rate than the Commonwealth of Virginia as a whole. The subregions of South Riding/Aldie and Gainesville/Haymarket/Bull Run are expecting the fastest growth (**Exhibit 7**).

Exhibit 7 maps the anticipated population change by ZIP code from 2013 to 2018. The highest population growth is anticipated in Loudoun and Prince William counties.

Exhibit 7: Population Change by ZIP Code, 2013-2018



Sources: Microsoft MapPoint and the Metropolitan Washington Council of Governments, 2012.

Exhibit 8 indicates that the 65+ age cohort is expected to increase faster than the population of the community as a whole. The proportion aged 18 to 44 years is expected to decline.

Exhibit 8: Percent Change in Population by Age, 2008-2013 and 2013-2018

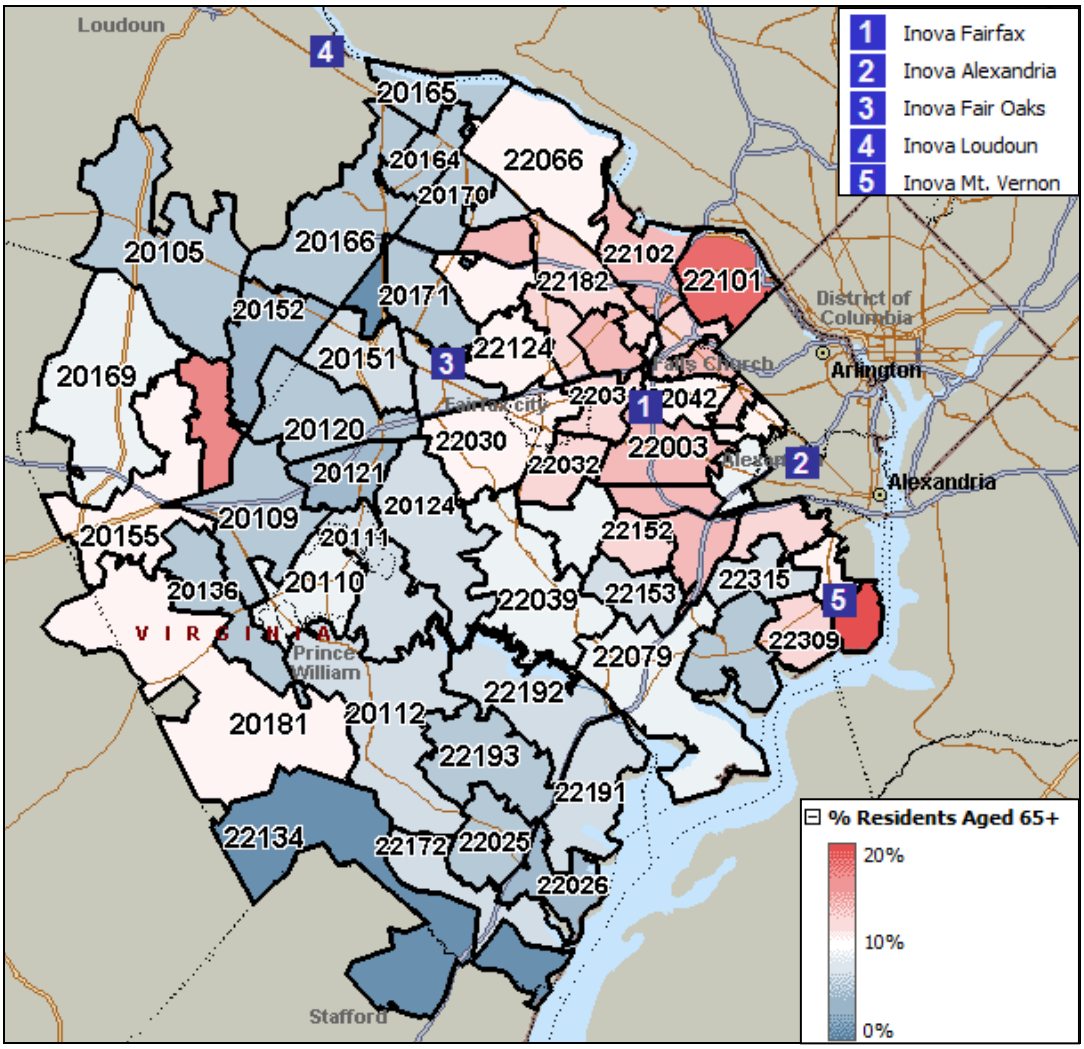
Age/Sex Cohort	Community Population			% Change in Population	
	2008	2013	2018	2008-2013	2013-2018
Primary Service Area					
0-17	25.4%	25.0%	24.8%	2.7%	0.6%
Female 18-44	17.2%	15.6%	15.3%	-5.2%	-1.0%
Male 18-44	17.6%	16.3%	16.0%	-3.2%	-0.6%
45-54	16.8%	16.2%	16.0%	0.4%	0.3%
55-64	13.3%	14.7%	14.9%	15.0%	2.9%
65+	9.6%	12.3%	12.9%	33.3%	6.2%
Total	**1,119,459**	**1,169,661**	**1,183,048**	**4.5%**	**1.1%**
Secondary Service Area					
0-17	28.5%	28.2%	28.1%	13.7%	2.9%
Female 18-44	20.8%	18.9%	18.5%	4.4%	0.9%
Male 18-44	21.4%	19.5%	19.1%	4.6%	0.9%
45-54	14.1%	15.0%	15.2%	23.1%	4.2%
55-64	8.9%	10.5%	10.8%	35.4%	6.4%
65+	6.2%	7.9%	8.3%	46.0%	8.4%
Total	**460,318**	**529,751**	**546,380**	**15.1%**	**3.1%**
Combined Service Areas					
0-17	26.3%	26.0%	25.9%	6.2%	1.4%
Female 18-44	18.3%	16.6%	16.3%	-2.0%	-0.3%
Male 18-44	18.7%	17.3%	17.0%	-0.6%	0.0%
45-54	16.0%	15.8%	15.8%	6.2%	1.5%
55-64	12.0%	13.4%	13.6%	19.4%	3.8%
65+	8.6%	10.9%	11.4%	36.0%	6.7%
Total	**1,579,777**	**1,699,412**	**1,729,428**	**7.6%**	**1.8%**

Source: The Metropolitan Washington Council of Governments, 2012.

Growth and aging of the population, coupled with the impact of coverage expansions associated with health reforms, will increase demand for health services.

The proportion of the population 65 years of age and older varies by ZIP code. The subregions of Mt. Vernon South/Ft. Belvoir and Mclean/Great Falls (ZIP codes 22308 and 22101, respectively) have comparatively high proportions of this population (**Exhibit 9**).

Exhibit 9: Percentage of Residents Aged 65+, 2008



Sources: Microsoft MapPoint and the Metropolitan Washington Council of Governments, 2012.

Growth and aging of the population, coupled with the impact of coverage expansions associated with health reforms, will increase demand for health services

…

Areas most proximate to Inova Fairfax Medical Campus have higher proportions of the population aged 65+

In 2008, about 63 percent of the community's population was White. Non-White populations are expected to grow faster than White populations in the community. The Asian and "Other" populations are expected to increase the most (**Exhibit 10**). The growing diversity of the community is important to recognize given health disparities present. There is a need to enhance the cultural competency of health care providers.

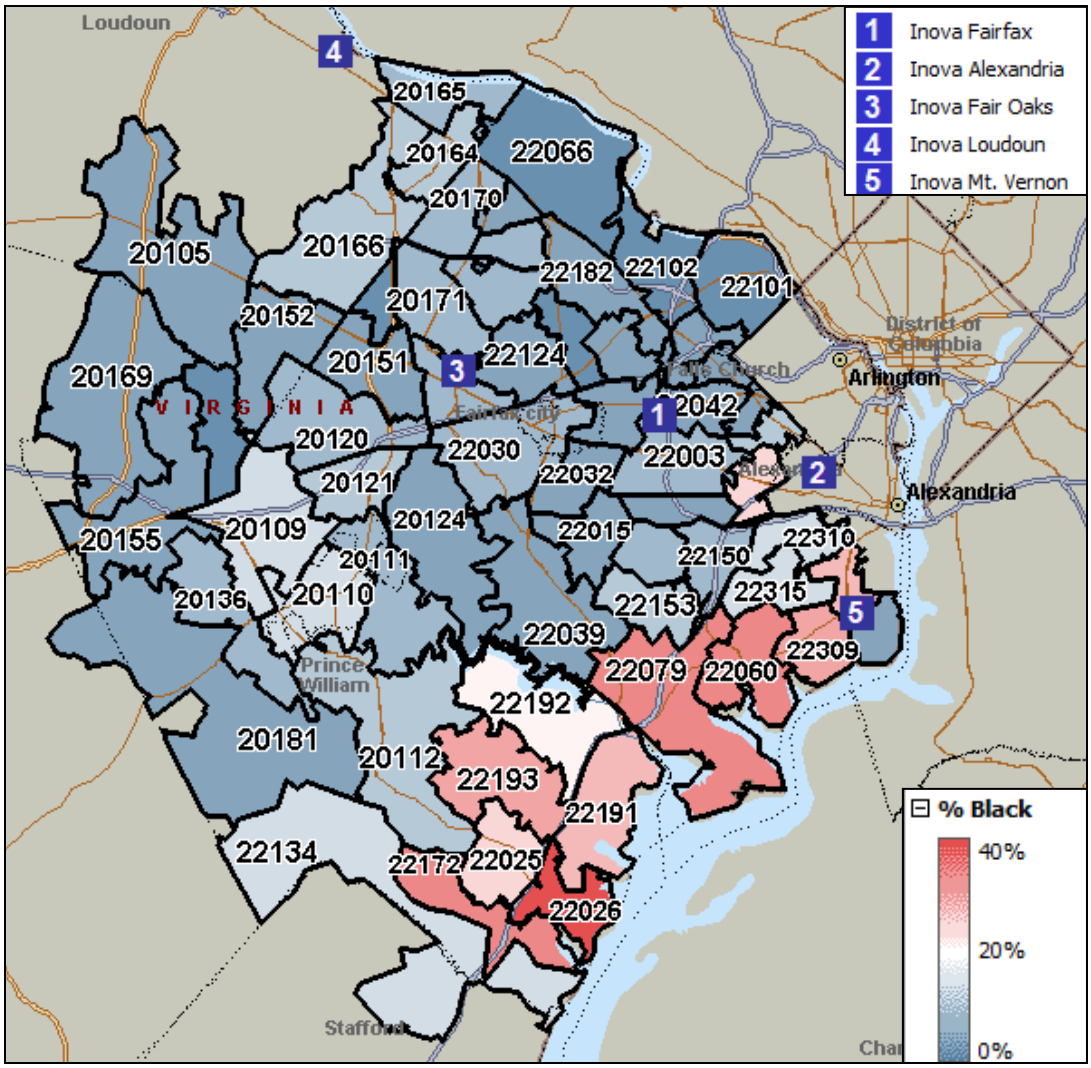
Exhibit 10: Distribution of Population by Race, 2008-2013 and 2013-2018

Racial Cohort	Community Population			% Change in Population	
	2008	2013	2018	2008-2013	2013-2018
Primary Service Area					
Asian	15.1%	16.8%	17.2%	16.3%	3.3%
Black	9.4%	9.9%	10.0%	10.2%	2.1%
Other	10.0%	11.0%	11.2%	15.3%	3.1%
White	65.6%	62.3%	61.6%	-0.7%	0.0%
Total	**1,119,459**	**1,169,661**	**1,182,234**	**4.5%**	**1.1%**
Secondary Service Area					
Asian	9.9%	12.8%	13.4%	50.1%	8.6%
Black	17.6%	17.8%	17.7%	16.7%	3.2%
Other	14.6%	18.0%	18.7%	42.9%	7.7%
White	58.0%	51.4%	50.2%	2.4%	1.3%
Total	**458,711**	**529,939**	**549,721**	**15.5%**	**3.7%**
Combined Service Areas					
Asian	13.6%	15.6%	16.0%	23.4%	4.6%
Black	11.8%	12.3%	12.4%	13.1%	2.6%
Other	11.3%	13.2%	13.6%	25.7%	5.0%
White	63.4%	58.9%	58.0%	0.1%	0.3%
Total	**1,578,170**	**1,699,600**	**1,731,955**	**7.7%**	**1.9%**

Source: Claritas, Inc., 2012.
*Date by Race/Ethnicity provide slightly different population projections for 2018 compared to other demographic data assessed in this report.

Exhibit 11 portrays the concentration of Black residents in the Inova Fairfax community. Black populations are most prevalent in Dale City/Dumfries/Quantico (ZIP codes 22026 and 22172), Mt. Vernon South/Ft. Belvoir (ZIP code 22060), and Lorton/Newington (ZIP code 22079).

Exhibit 11: Areas with Highest Concentration of Black Residents, 2008



Sources: Microsoft MapPoint and Claritas, Inc., 2012.

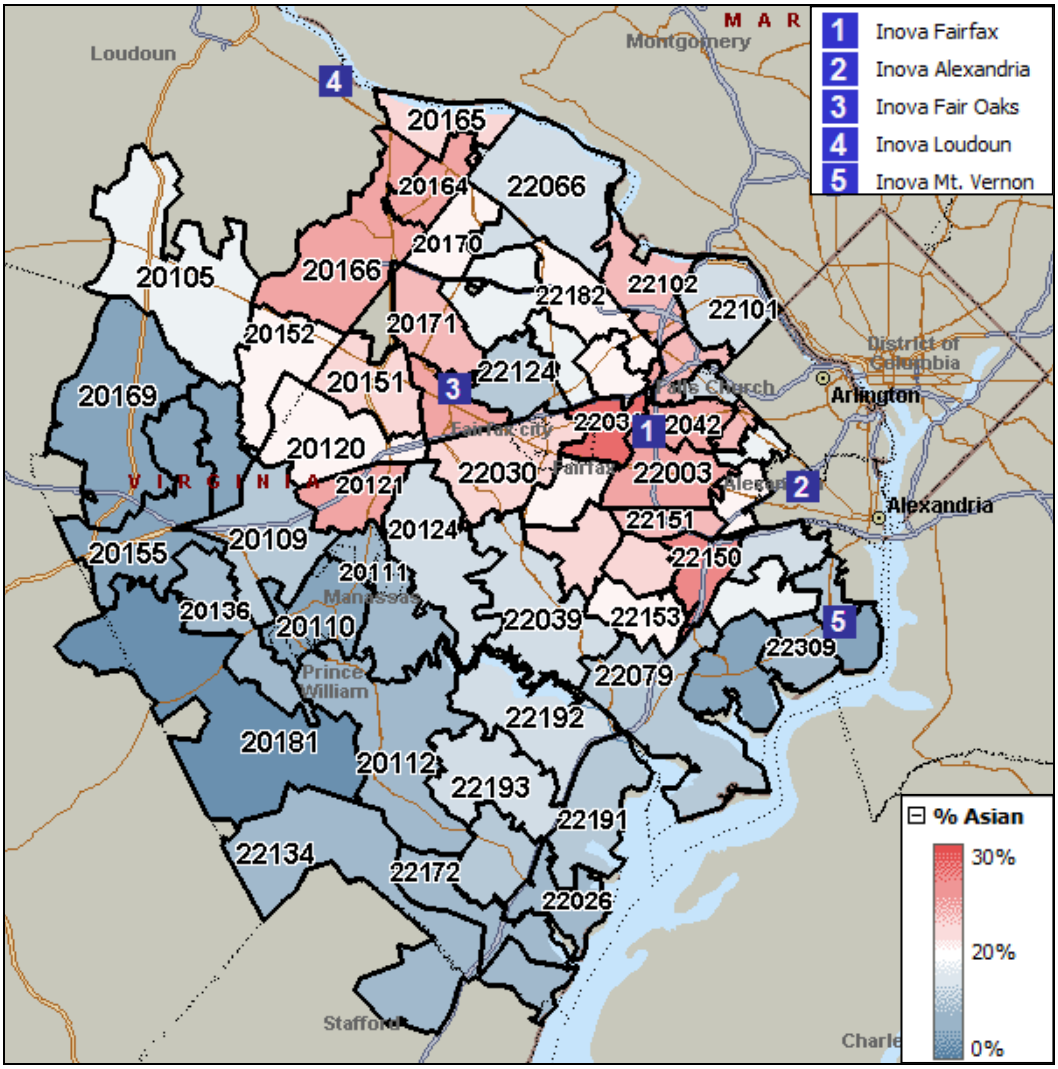
Black populations are expected to increase by 13% between 2008 and 2013 and 3% between 2013 and 2018

…

Black populations are most prevalent in Prince William and Fairfax counties along the Richmond Highway corridor

Exhibit 12 portrays the concentration of Asian residents in the Inova Fairfax community. Asian populations are most prevalent in East Fairfax 29/50 Corridor (ZIP code 22031) and Springfield (ZIP code 22150).

Exhibit 12: Areas with Highest Concentration of Asian Residents, 2008



Sources: Microsoft MapPoint and Claritas, Inc., 2012.

Asian populations are expected to increase by 23% between 2008 and 2013 and 5% between 2013 and 2018

…

Asian populations are most prevalent in East Fairfax 29/50 Corridor (ZIP code 22031) and Springfield (ZIP code 22150)

Projections indicate that the Hispanic (or Latino) community population is expected to increase more rapidly than non-Hispanic (or Latino) ethnicities. In terms of overall percent change, the Inova Fairfax community is projected to experience growth in the Hispanic (or Latino) population of approximately 30 percent between 2008 and 2013 and six percent between 2013 and 2018. Growth is particularly high in the hospital's secondary service area (**Exhibit 13**).

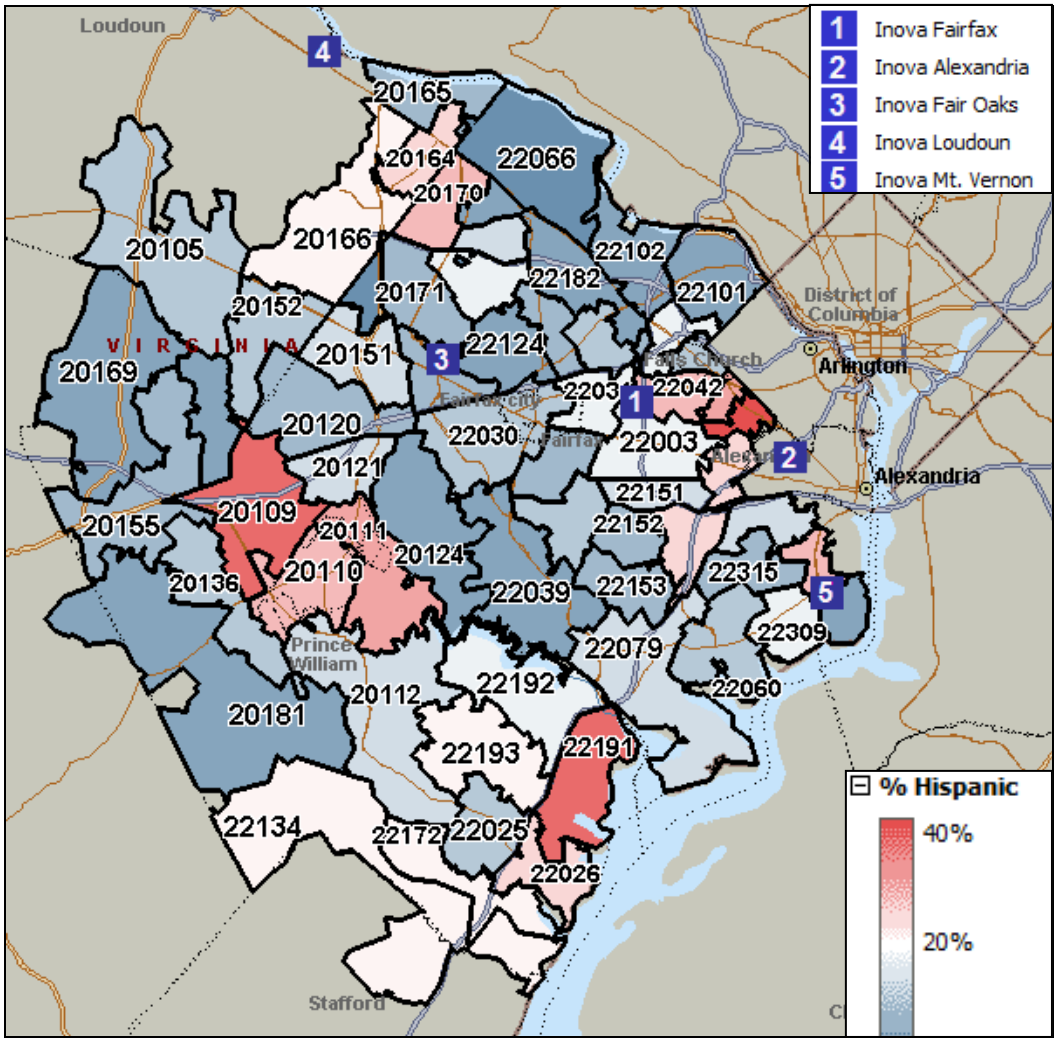
Exhibit 13: Distribution of Population by Ethnicity, 2008-2013 and 2013-2018

Ethnic Cohort	Community Population			% Change in Population	
	2008	2013	2018	2008-2013	2013-2018
Primary Service Area					
Hispanic (or Latino)	13.5%	15.2%	15.5%	17.8%	3.6%
Not Hispanic (or Latino)	86.5%	84.8%	84.5%	2.4%	0.6%
Total	**1,119,459**	**1,169,661**	**1,182,234**	**4.5%**	**1.1%**
Secondary Service Area					
Hispanic (or Latino)	20.8%	27.1%	28.4%	50.3%	8.7%
Not Hispanic (or Latino)	79.2%	72.9%	71.6%	6.4%	1.9%
Total	**458,711**	**529,939**	**549,721**	**15.5%**	**3.7%**
Combined Service Areas					
Hispanic (or Latino)	15.6%	18.9%	19.6%	30.4%	5.8%
Not Hispanic (or Latino)	84.4%	81.1%	80.4%	3.5%	1.0%
Total	**1,578,170**	**1,699,600**	**1,731,955**	**7.7%**	**1.9%**

Source: Claritas, Inc., 2012.
*Date by Race/Ethnicity provide slightly different population projections for 2018 compared to other demographic data assessed in this report.

Exhibit 14 illustrates the concentration of Hispanic (or Latino) residents in the Inova Fairfax community. Hispanic communities appear to be most highly concentrated in Lincolnia/Bailey's Crossroads (ZIP code 22041), Manassas West (ZIP code 22109), and Woodbridge (ZIP code 22191).

Exhibit 14: Areas with Highest Concentration of Hispanic (or Latino) Residents, 2008



Sources: Microsoft MapPoint and Claritas, Inc., 2012.

The Hispanic (or Latino) population is growing rapidly

…

The highest proportions of Hispanic or Latino residents live in Lincolnia/Bailey's Crossroads (ZIP code 22041), Manassas West (ZIP code 22109), and Woodbridge (ZIP code 22191)

Other demographic characteristics are presented in **Exhibit 15**.

Exhibit 15: Prevalence of Demographic Indicators and Variation from the Commonwealth of Virginia, 2010

Demographic Indicators	Fairfax County	Loudoun County	Prince William County	Virginia	U.S.
Total Population With Any Disability	6.0%	4.5%	6.0%	**10.8%**	**11.9%**
Population 0-18 With Any Disability	2.2%	1.9%	2.0%	**3.4%**	**4.0%**
Population 18-64 With Any Disability	4.5%	3.7%	5.6%	**8.9%**	**10.0%**
Population 65+ With Any Disability	25.9%	26.6%	28.1%	**35.1%**	**36.7%**
Residents 25+ Who Did Not Graduate High School	8.4%	6.6%	12.4%	**13.5%**	**14.4%**
Residents 5+ Who Are Linguistically Isolated	15.0%	9.4%	13.5%	**5.7%**	**8.7%**
Housing Units With No Car	4.0%	2.9%	3.1%	**6.2%**	**9.1%**

Source: U.S. Census Bureau, 2012.

These characteristics include:

- In 2010, the three counties presented had lower percentages of disabled residents than Virginia and national averages. More community residents aged 25 and older have graduated from high school than the Virginia and national averages. Prince William County had the highest non-graduation rate at 12 percent.
- All three counties had a higher percentage of linguistically isolated individuals than the Virginia and national averages, with Fairfax County having the highest percentage at 15 percent. Linguistic isolation is defined as the population aged 5 and older who speak a language other than English at home and who speak English less than "very well."

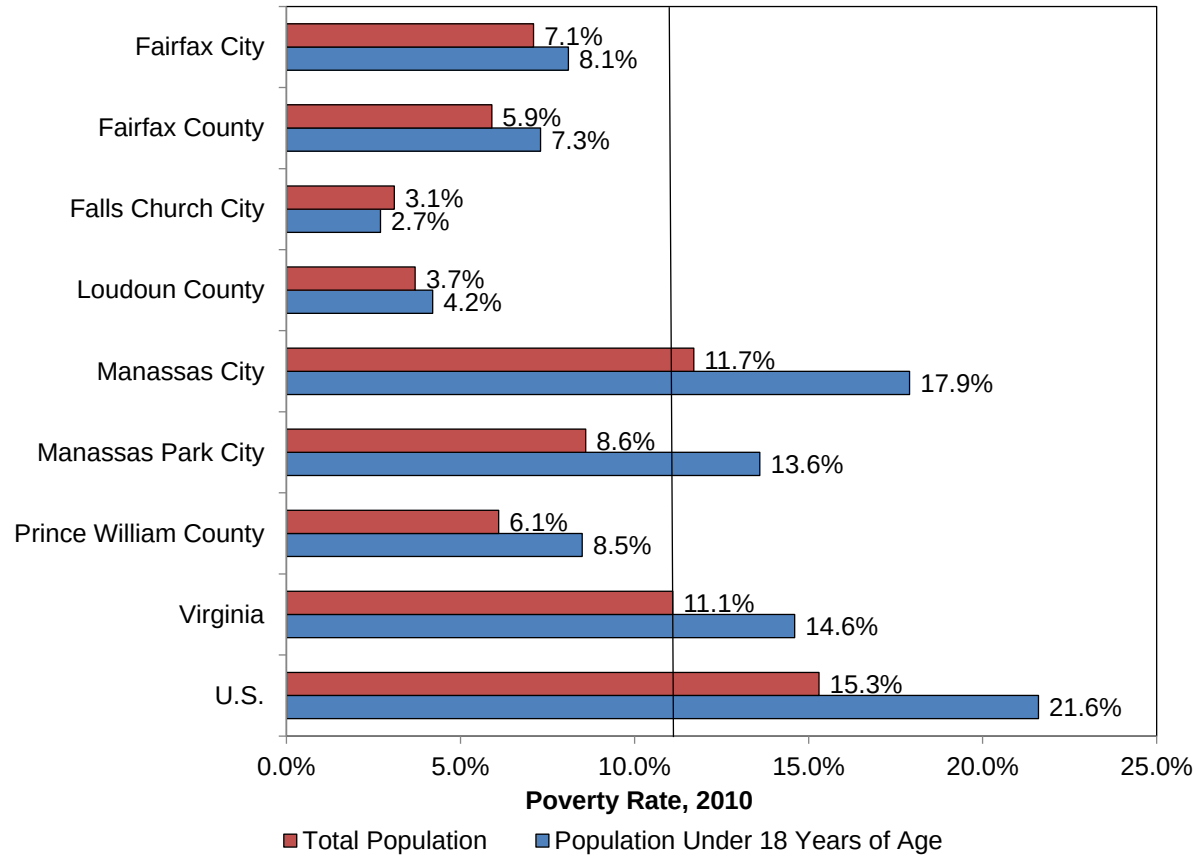
Economic Indicators

The following types of economic indicators with implications for health were assessed: (1) people in poverty, (2) unemployment rates, (3) homelessness, (4) crime, (5) Commonwealth of Virginia and local budget cuts, (6) utilization of government assistance programs, (7) household income, and (8) insurance status.

1. People in Poverty

Many health needs are associated with poverty. According to the U.S. Census, in 2010, about 15 percent of people in the U.S. and about 11 percent of people in Virginia lived in poverty. Manassas City reported a poverty rate in 2010 that was higher than the Virginia average (**Exhibit 16**). The pediatric population in all jurisdictions except Falls Church City reports a higher poverty rate than the adult population.

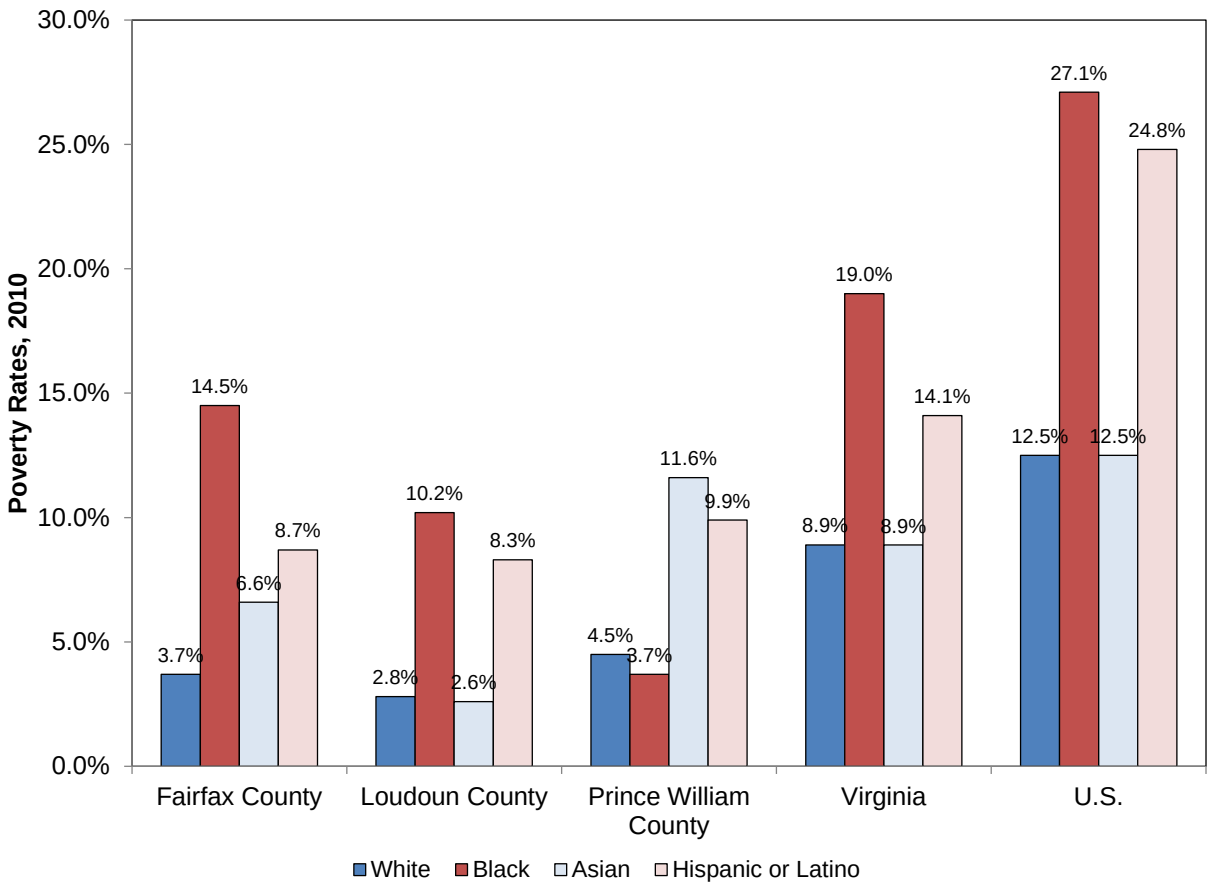
Exhibit 16: Percent of People in Poverty, 2010



Source: U.S. Census Bureau, 2011.

Exhibit 17 presents poverty rates by race. The poverty rates for the Black and Hispanic (or Latino) populations of Fairfax and Loudoun counties and the Asian and Hispanic (or Latino) populations of Prince William County were higher than other groups.

Exhibit 17: Percent of People in Poverty by Race, 2010*

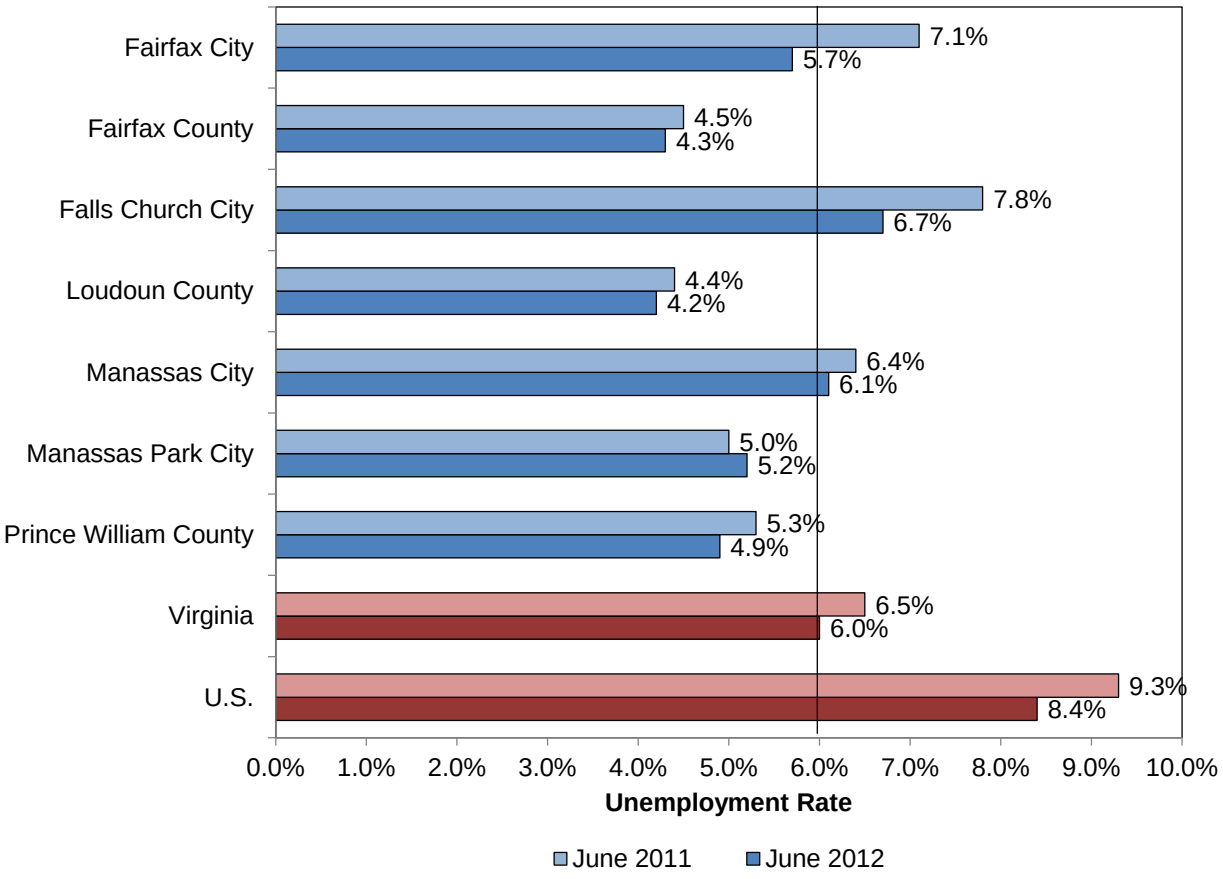


Source: U.S. Census Bureau, 2011.
* Poverty data by race were available only for counties.

2. Unemployment Rates

Falls Church City and Manassas City reported higher unemployment rates in 2012 than the Virginia average (**Exhibit 18**). High unemployment rates are associated with high numbers of uninsured people due to the lack of employer-based insurance.

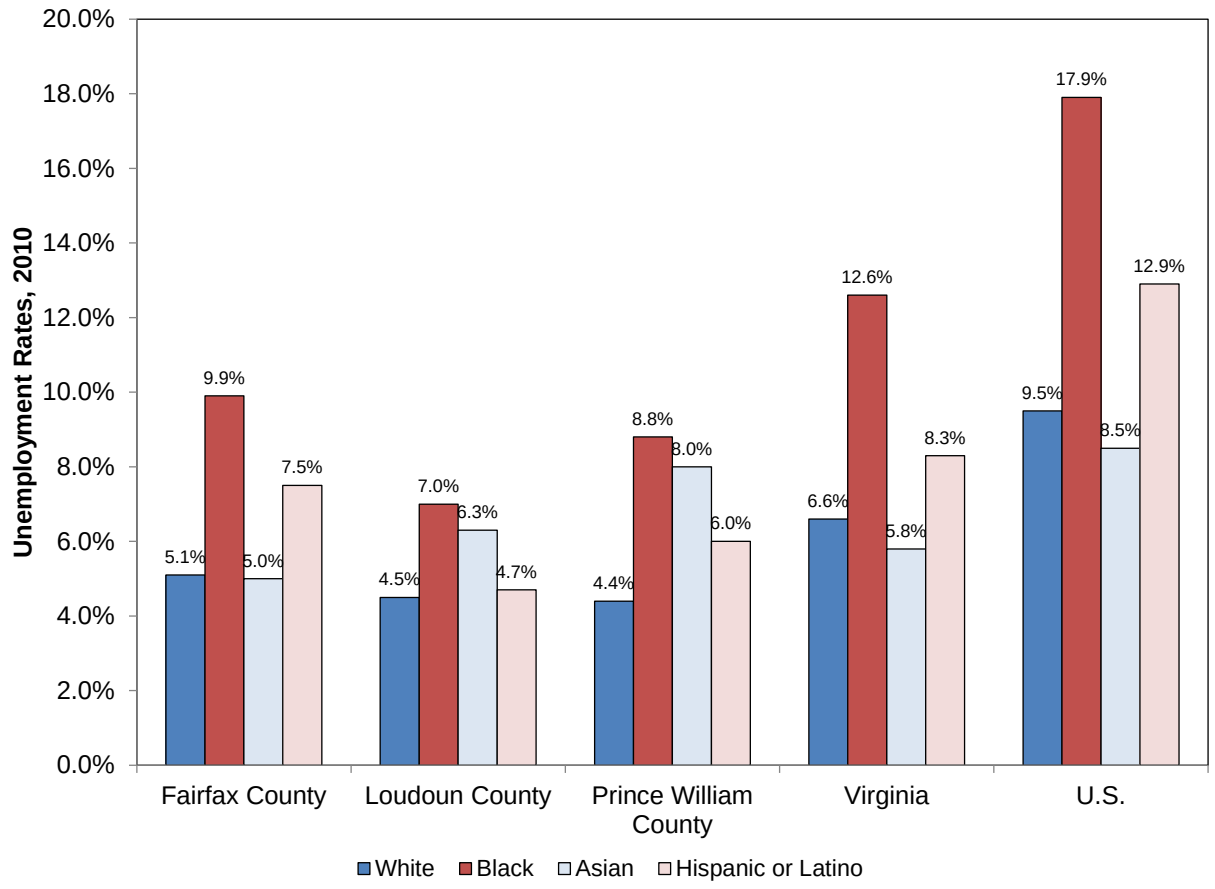
Exhibit 18: Unemployment Rates, 2011 and 2012



Source: U.S. Bureau of Labor Statistics, 2012.

The unemployment rate was highest for the Black populations in all areas for which data are available (**Exhibit 19**).

Exhibit 19: Unemployment Rates by Race, 2010*



Source: U.S. Census Bureau, 2011.
* Unemployment data by race were available only for the year 2010 for larger jurisdictions.

3. Homelessness

Since 2001, the Metropolitan Washington Council of Governments has conducted an annual count of the homeless population in the metropolitan region. Of the three counties served by the hospital, Fairfax County reported the highest rates of homelessness between 2008 and 2011 (**Exhibit 20**). Rates of homelessness appear to have decreased between 2008 and 2011.

Exhibit 20: Homelessness Rates by Jurisdiction, 2008-2011

Jurisdiction	Homelessness Rate				Percent Change in Rates 2008-2011
	2008	2009	2010	2011	
Fairfax County	17.4	16.1	14.3	13.6	-21.6%
Loudoun County	5.9	5.0	5.4	4.8	-18.2%
Prince William County	13.3	14.7	11.4	12.0	-10.4%
Total	**14.5**	**13.9**	**12.1**	**11.7**	**-19.3%**
Northern Virginia	**15.7**	**15.6**	**14.4**	**13.7**	**-12.6%**

Source: Homeless counts retrieved from the Metropolitan Washington Council of Governments' 2012 Homeless in Metropolitan Washington report. Jurisdiction population estimates were retrieved from the U.S. Census Bureau: American Community Survey 5 Year Estimates 2006-2010, Annual Estimates of the Resident Population for Counties of Virginia April 1, 2000 to July 1, 2009, and County 2011 Population Datasets April 1, 2010 to July 1, 2011.
*Rates are per 100,000 population.

4. Crime Rates

The Federal Bureau of Investigation reports data on violent crime in the United States from county and city police departments that participate in its Uniform Crime Reporting (UCR) Program. Manassas City reported higher rates of total violent crime, robbery, and aggravated assault than the Virginia average in 2010, while Manassas City and Manassas Park City reported higher rates of forcible rape than Virginia and national averages (**Exhibit 21**).

Exhibit 21: Violent Crime Rates, 2010

Jurisdiction	Population 2010	Violent Crime Rates per 100,000 Population				
		Total Violent Crime	Murder and Non-negligent Manslaughter	Forcible Rape	Robbery	Aggravated Assault
Fairfax City	22,058	136.0	0.0	13.6	45.3	77.1
Fairfax County	1,048,554	92.6	2.2	12.1	36.5	41.8
Falls Church City	11,465	113.4	0.0	8.7	52.3	52.3
Loudoun County	291,653	64.8	0.0	9.9	12.0	42.9
Manassas City	36,067	379.8	2.8	41.6	152.5	183.0
Manassas Park City	13,195	136.4	0.0	53.1	45.5	37.9
Prince William County	379,415	163.4	2.4	10.3	60.1	90.7
Virginia	**7,841,754**	**217.9**	**4.7**	**19.5**	**72.1**	**121.5**
U.S.	**303,965,272**	**410.0**	**4.9**	**27.9**	**121.0**	**256.2**

Sources: Violent crime counts were retrieved from the Federal Bureau of Investigation, Uniform Crime Reports, 2012. Population 2010 estimates were obtained from the U.S. Census Bureau, ACS 5 Year Estimates 2006-2010. Rates were calculated by Verité.

5. Commonwealth of Virginia and Local Budget Cuts

The recent recession has had major implications for employment and for the availability of state and county resources devoted to health, public health, and social services. The Commonwealth of Virginia has significantly reduced funding appropriated to these services.

Governor McDonnell's proposed budget[5] for the 2012-2014 biennium was approved by the 2012 General Assembly. Funding changes include:

- **Children and Youth Services**
    - Elimination of funding for child advocacy centers in the Office of Secretary of Health and Human Resources and Department of Social Services ($846,000 for both FY 2013 and FY 2014, for a total reduction of $1,692,000);
    - Reductions in base funding to the Comprehensive Services Act for At-Risk Youth and Families (CSA) ($17,678,003 for FY 2013 and $14,987,327 for FY 2014, for a total reduction of $32,665,330) and elimination of general fund support for wrap-around services in public schools ($5,401,216 for both FY 2013 and FY 2014, for a total reduction of $10,802,432 (offset by $700,000));
    - Elimination of funding for the Teen Pregnancy Prevention Initiative in Alexandria City[6] (the Initiative operated in the Richmond, Norfolk, Alexandria, Roanoke City, Crater, Portsmouth, and Eastern Shore health districts; funding reductions for the entire Initiative are $455,00 for both FY 2013 and FY 2014, for a total reduction of $910,000);
- **Aging and Elderly Services**
    - Elimination of funding for certain non-state agencies that serve aging and elderly populations ($386,722 for FY 2013 and $767,945 for FY 2014, for a total reduction of $1,154,667), including the Prince William County Care Coordination for the Elderly Virginians Program (approximately $5,500 for FY 2013 and $11,000 for FY 2014, for a total reduction of approximately $16,500);
    - Reductions in funding for in-home and community-based services, such as adult day care, homemaker, personal care, and transportation services, provided by Virginia's Area Agencies on Aging ($131,853 for both FY 2013 and FY 2014, for a total reduction of $263,706);
- **Health Services for Indigent and Low-income Populations**
    - Reductions in funding for Alexandria Neighborhood Health Services, Inc. ($37,830 for FY 2014);
    - Reductions in funding for the Jeanie Schmidt Free Clinic of Virginia ($19,125 for FY 2014);
    - Reductions in funding for the Mission of Mercy program through the Virginia Dental Association Foundation ($425 for FY 2013 and $10,625 for FY 2014, for a total reduction of $11,050);
    - Reductions in funding for the Virginia Association of Free Clinics ($1,598,200 for FY 2014), the Virginia Community Healthcare Association ($1,204,375 for FY 2014), and the Virginia Health Care Foundation ($2,040,286 for FY 2014);

[5]The 2012 Executive Budget Document. Retrieved on August 2, 2012 from http://dpb.virginia.gov/budget/buddoc12/index.cfm.
[6]Alexandria City committed City general funds to maintain this program.

- Elimination of funding for the three remaining general medical clinics in Virginia, including the one in the Alexandria Health Department ($233,500 in FY 2013 and $466,963 in FY 2014, for a total reduction of $700,463);
- Elimination of funding for commonwealth supported dental clinics ($1,664,306 for both FY 2013 and FY 2014, for a total reduction of $3,328,612);
- Reductions in income limits for the Medicaid long-term care eligibility group ($36,435,516 for FY 2014);
- Reductions in funding to the commonwealth's Medicaid Children's Health Insurance Program due to slowed enrollment and lower managed care rates ($8,254,417 in FY 2013 and $52,782,923 in FY 2014, for a total reduction of $61,037,340);
- Reductions in funding to the VCU and UVA academic health centers for indigent care services ($14,995,994 for both FY 2013 and FY 2014, for a total reduction of $29,991,988);

- **Health Departments, Facilities, and Workers**
  - Reductions in general fund appropriations to the Department of Health ($1,771,250 FY 2013 and $8,224,191 for FY 2014, for a total reduction of $9,995,441);
  - Reductions in funding to the Department of Health Professions ($97,067 for both FY 2013 and FY 2014, for a total reduction of $194,134);
  - Withholding annual inflation adjustments from rates paid to nursing facilities ($51,479,932 FY 2013 and $79,055,622 for FY 2014, for a total reduction of $130,535,554), home health agencies ($154,126 for FY 2013 and $330,992 for FY 2014, for a total reduction of $485,118), outpatient rehabilitation agencies ($413,744 FY 2013 and $804,262 for FY 2014, for a total reduction of $1,218,006), and hospitals ($197,317,468 FY 2013 and $323,309,280 for FY 2014, for a total reduction of $520,626,748);
- **Other Health Programs and Services**
  - Reductions in the number of sign language interpreters provided for certain Twelve-Step Programs($16,900 for both FY 2013 and FY 2014, for a total reduction of $33,800);
  - Balance the non-general fund appropriations for the Temporary Assistance for Needy Families (TANF) block grant for the Comprehensive Health Investment Project of Virginia (6,164,233 FY 2013 and $5,107,564 for FY 2014, for a total reduction of $11,271,797); and,
  - Elimination of one Virginia Epidemiology Response Team position ($48,335 for both FY 2013 and FY 2014, for a total reduction of $96,670).

In addition to the commonwealth's budget reductions, service area counties' proposed FY 2013 budgets include the following changes.

- **Fairfax County**:[7]
    - A decrease of about 4 percent since 2011 in the Fairfax County Health Department; and
    - A decrease of about 3 percent since 2011 in the total health and welfare department, including the Department of Family Services, Department of Administration for Human Services, the Health Department, the Office to Prevent and End Homelessness, and the Department of Neighborhood and Community Services.
- **Loudoun County**:[8]
    - A decrease in health services expenditures from $4,244,348 to $4,386,074 in FY 2012;
    - A proposed decrease in mental health, substance abuse, and developmental services from $4,147,500 to $3,721,440 funded through state aid; and
    - A proposed decrease in mental health, substance abuse, and developmental services from $805,080 to $437,520 funded through federal aid.
- **Prince William County**:[9]
    - A projected increase in expenditures of 4 percent in maternal and child health between 2012 and 2013;
    - A projected increase in emergency preparedness of 5 percent in emergency preparedness between 2012 and 2013;
    - A projected increase in environmental health of 5 percent in environmental health between 2012 and 2013;
    - An increase in the free clinic budget from $70,800 to $72,925; and
    - An increase in the total public health budget from $287,245 to $295,863.

Health and social services agencies across Northern Virginia have expressed many concerns about these funding reductions.

[7] City of Fairfax FY 2013 Proposed Budget.1-11 http://www.fairfaxcounty.gov/dmb/
[8] City of Loudoun FY 2013 Proposed Budget.1-11 http://va-loudouncounty.civicplus.com/index.aspx?NID=2341
[9] Prince William County FY 2013 Proposed Budget.1-11 http://www.pwcgov.org/government/dept/budget/Pages/FY-2013-Budget.aspx#brief

6. Utilization of Government Assistance Programs

Federal, state, and local governments provide assistance programs for low-income individuals and families. These programs include vouchers that subsidize housings costs, free and reduced priced lunches at public schools through the National School Lunch Program, the Supplemental Nutrition Assistance Program (SNAP), and Temporary Assistance for Needy Families (TANF).

Housing certificates and vouchers allow residents who meet certain eligibility criteria to receive monthly housing assistance under Section 8 of the Housing Act of 1937. Under that program, subsidies of rental and mortgage costs help make housing more affordable. Residents who apply for these certificates and vouchers may be placed on a waiting list before funds become available. Fairfax County, Loudoun County, Manassas Park City, and Prince William County all reported average months on the waiting list for Section 8 housing certificates and vouchers that were equal to or greater than the Virginia average. Average household and federal contributions for these areas are noticeably higher than the U.S. and Virginia averages (**Exhibit 22**).

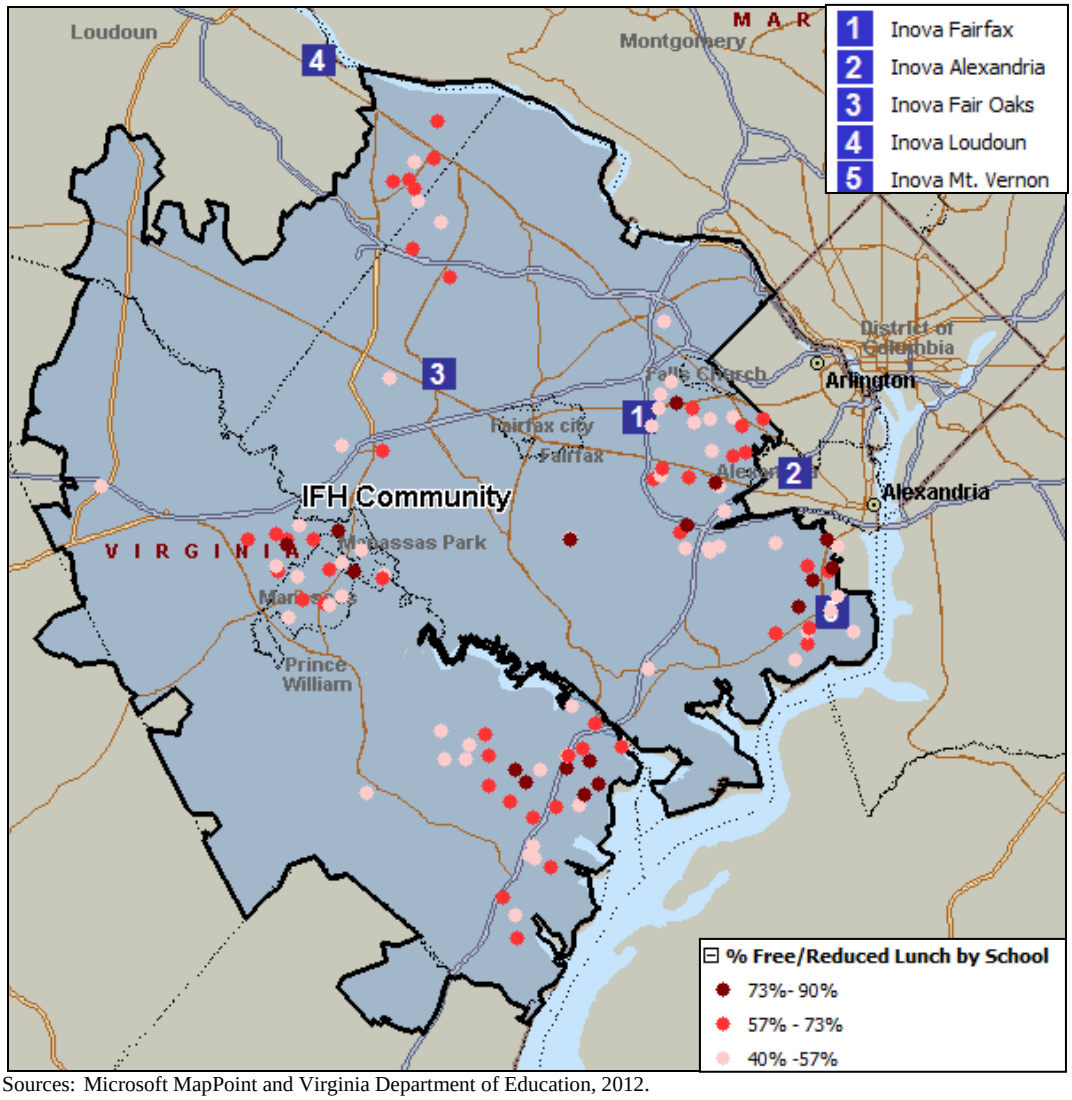
Exhibit 22: Waiting Time for Section 8 Housing Certificates and Vouchers by Jurisdiction, 2009

Jurisdiction	Number of Participating Households	Spending per Unit per Month		Average Months on Waiting List
		Average Household Contribution	Average Federal Contribution	
Fairfax County	3,136	$462	$1,068	10
Fairfax City	36	$360	$1,030	0
Falls Church City	113	$299	$949	8
Loudoun County	706	$464	$953	20
Manassas City	238	$356	$984	8
Manassas Park City	78	$385	$1,076	17
Prince William County	1,844	$462	$1,031	13
Virginia	**42,727**	**$359**	**$676**	**10**
U.S.	**2,071,161**	**$335**	**$657**	**14**

Source: U.S. Department of Housing and Urban Development, 2012.

Schools participating in the National School Lunch Program are eligible to receive financial assistance from the USDA to provide free or reduced-cost meals to low-income students. Schools with 40 percent or more of their student body receiving free or reduced-cost meals are eligible for school-wide Title I funding, designed to ensure that students meet grade-level proficiency standards. In the Inova Fairfax community, 112 out of 324 schools had greater than 40 percent of the student body eligible for free or reduced-cost lunches (**Exhibit 23**). These schools are located near Sterling/Dulles, Manassas and Manassas Park cities, Lincolnia/Bailey's Crossroads, East Fairfax 29/50 Corridor, and along the Richmond Highway Corridor.

Exhibit 23: Public Schools with Over 40 Percent of Students Eligible for Free or Reduced Price Lunches, School Year 2011-2012



Sources: Microsoft MapPoint and Virginia Department of Education, 2012.

Exhibit 24 shows the percent of the total population enrolled in the Supplemental Nutrition Assistance Program (SNAP). This U.S. Department of Agriculture program provides financial support for low-income and no-income residents to purchase food. Ten percent of residents in Manassas City were enrolled in SNAP in 2010.

Exhibit 24: Supplemental Nutrition Assistance Program (SNAP) Enrollment, 2010

Jurisdiction	Average SNAP Enrollment	Total Population	Percent of Total Population
Fairfax County	36,958.8	1,082,077	3.4%
Loudoun County	7,428.0	291,653	2.5%
Manassas City	3,648.1	36,067	10.1%
Manassas Park City	1,164.3	13,195	8.8%
Prince William County	23,915.4	379,415	6.3%
Virginia	**806,895.3**	**7,841,754**	**10.3%**

Source: Enrollment data was retrieved from the Virginia Department of Social Services, 2012. Population 2010 estimates were obtained from the U.S. Census Bureau, ACS 5 Year Estimates 2006-2010.

Exhibit 25 shows the percent of the total population enrolled in TANF. This U.S. Department of Health and Human Services program provides financial assistance to eligible low-income and no-income families with dependent children. One percent of residents in Manassas City were enrolled in TANF in 2010.

Exhibit 25: Temporary Assistance for Needy Families (TANF) Enrollment, 2010

Jurisdiction	Average TANF Enrollment	Total Population	Percent of Total Population
Fairfax County	3,177.0	1,082,077	0.3%
Loudoun County	599.3	291,653	0.2%
Manassas City	455.8	36,067	1.3%
Manassas Park City	94.4	13,195	0.7%
Prince William County	2,940.8	379,415	0.8%
Virginia	**77,092.3**	**7,841,754**	**1.0%**

Source: Enrollment data were retrieved from the Virginia Department of Social Services, 2012. Population 2010 estimates were obtained from the U.S. Census Bureau, ACS 5 Year Estimates 2006-2010.

7. Household Income

In the Inova Fairfax community and in 2008, approximately six percent of all households had incomes below $25,000, an approximation of the federal poverty level (FPL) for a family of four; 20 percent had incomes less than $50,000, an approximation of 200 percent of the FPL for a family of four (**Exhibit 26**). FPL is used by many agencies and organizations to assess household needs for low-income assistance programs.

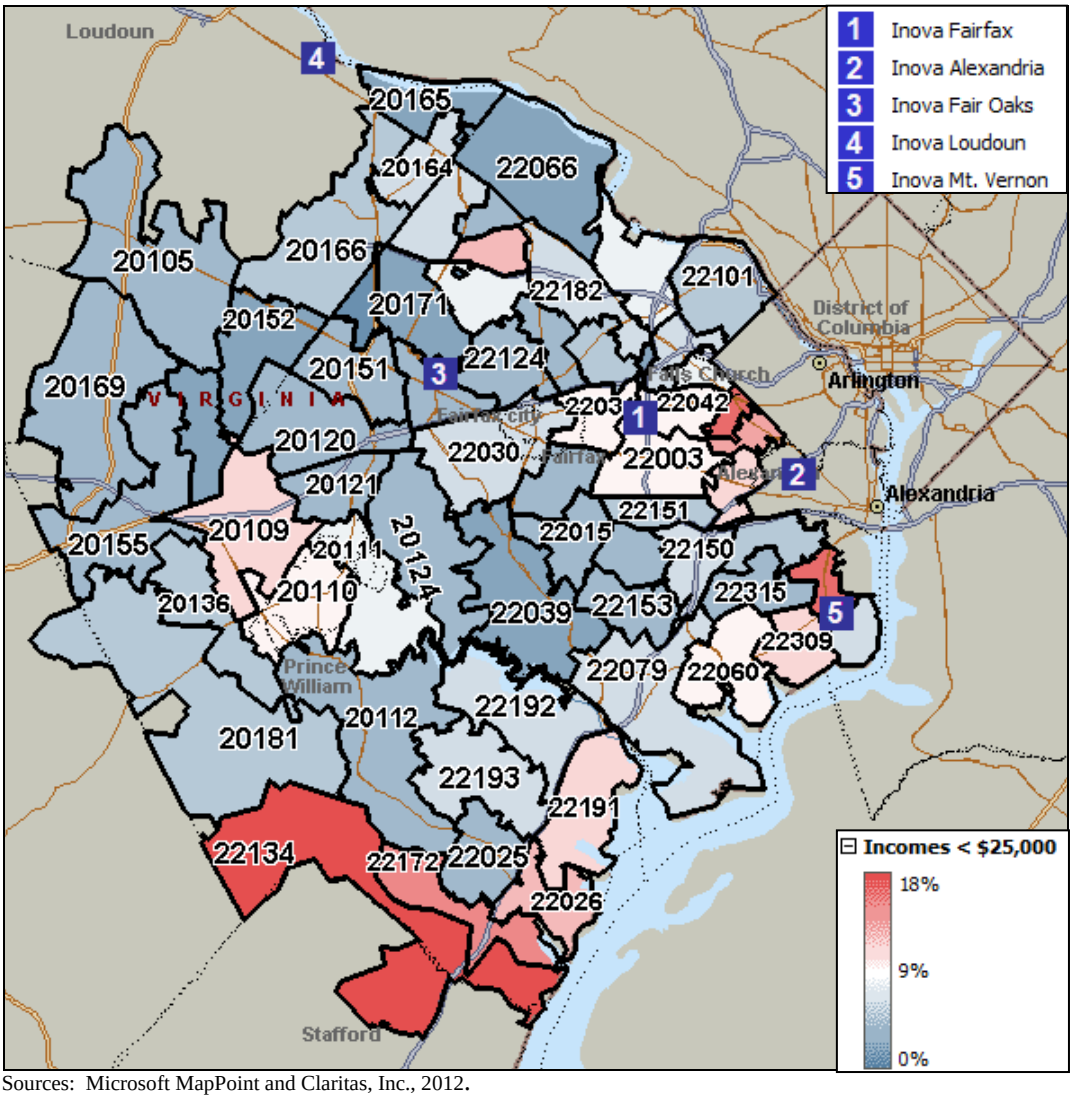
Exhibit 26: Percent Low-Income Households by Subregion, 2008

Subregion	Number of Households 2008	Average Household Income	Percent Less Than $25,000	Percent Less Than $50,000
Primary Service Area				
Fairfax County Subregions	**369,809**	**126,473**	**6.2%**	**18.5%**
Annandale/North Springfield	24,067	107,800	7.8%	22.3%
Centreville	23,466	114,407	3.7%	15.6%
Chantilly	6,126	125,436	3.6%	13.2%
Clifton/Fairfax Station	10,955	185,802	2.4%	8.2%
EastFairfax29/50Corridor	26,860	100,977	10.3%	27.0%
Fairfax City	16,104	119,960	5.9%	18.4%
Franconia/Kingstowne	21,725	115,555	3.8%	13.2%
GMU/Burke	23,749	128,678	3.8%	11.3%
Lincolnia/Bailey's Crossroads	19,985	90,395	12.1%	33.4%
Lorton/Newington	9,523	105,334	5.8%	20.6%
McLean/Great Falls	24,798	199,020	5.0%	12.8%
Mt. Vernon South/Ft. Belvoir	28,979	98,789	11.6%	32.4%
Oakton/Fair Lakes/South Herndon	34,746	155,886	3.2%	12.1%
Reston/Herndon	37,447	99,599	7.3%	20.0%
Springfield	29,598	116,592	4.3%	14.6%
Vienna	22,838	155,869	4.7%	13.1%
West Falls Church	8,843	115,353	6.2%	19.0%
Falls Church City Subregions	**5,837**	**117,904**	**8.2%**	**21.6%**
West Falls Church	5,837	117,904	8.2%	21.6%
Loudoun County Subregions	**9,771**	**129,456**	**2.9%**	**11.6%**
South Riding/Aldie	9,771	129,456	2.9%	11.6%
Prince William County Subregions	**17,810**	**112,745**	**5.8%**	**16.6%**
Manassas East	17,810	112,745	5.8%	16.6%
Primary Service Area Total	**403,227**	**125,820**	**6.2%**	**17.5%**
Secondary Service Area				
Fairfax County Subregions				
Dulles International Airport	-	-	-	-
Loudoun County Subregions	**29,885**	**105,308**	**3.8%**	**17.7%**
Sterling/Dulles	29,885	105,308	4.4%	17.7%
Manassas City Subregions	**13,821**	**88,610**	**8.8%**	**27.9%**
Manassas West	13,821	88,610	8.8%	27.9%
Prince William County Subregions	**113,239**	**97,134**	**6.7%**	**23.8%**
Manassas West	13,811	80,393	11.2%	34.8%
Dale City/Dumfries/Quantico	36,858	122,028	6.4%	22.3%
Gainesville/Haymarket/Bull Run	23,810	101,800	3.7%	13.0%
Lake Ridge/Occoquan	17,141	74,654	9.9%	37.3%
Woodbridge	21,619	74,186	5.3%	20.9%
Secondary Service Area Total	**158,924**	**92,627**	**6.7%**	**23.8%**
Combined Service Areas Total	**562,151**	**109,223**	**6.3%**	**19.9%**

Source: Claritas, Inc., 2012.

The highest proportions of households with incomes under $25,000 in 2010 were located in Dale City/Dumfries/Quantico (ZIP codes 22134 and 22172), East Fairfax 29/50 Corridor (ZIP code 22044), and Mt. Vernon South/Ft. Belvoir (ZIP code 22306). At 1.5 and 1.7 percent, Clifton/Fairfax Station (ZIP code 22039) and Vienna (ZIP code 22027) had the lowest proportions (**Exhibit 27**).

Exhibit 27: Percent of Households with Incomes Less than $25,000 by ZIP Code, 2008



Sources: Microsoft MapPoint and Claritas, Inc., 2012.

Dale City/Dumfries/Quantico (ZIP code 22134) had the highest proportion of lower-income households: 17%

…

Clifton/Fairfax Station (ZIP code 22039) had the lowest proportion: under 2%

8. Insurance Status

Exhibit 28 indicates that in 2010, a higher percentage of residents in Fairfax and Prince William counties were uninsured than the Virginia average.

Exhibit 28: Uninsured Population by Age Cohort and Jurisdiction, 2010

Jurisdiction	Total Population	Population Under 18	Population 18-64			
	Percent Uninsured	Percent Uninsured	Percent Uninsured and Employed	Percent Uninsured and Unemployed	Percent Uninsured not in Labor Force	Total Percent Uninsured
Fairfax County	13.5%	8.4%	11.9%	2.1%	3.0%	17.0%
Loudoun County	8.2%	4.2%	6.6%	1.7%	2.1%	10.4%
Prince William County	14.8%	7.4%	12.6%	2.8%	4.2%	19.6%
Virginia	**13.1%**	**6.6%**	**10.5%**	**3.0%**	**4.2%**	**17.8%**
U.S.	**15.5%**	**8.0%**	**12.4%**	**3.9%**	**5.1%**	**21.4%**

Source: U.S. Census Bureau, 2012.

Exhibit 29 portrays the distribution of community-wide discharges by subregion and by payer. This helps identify where the uninsured (self-pay) and Medicaid recipients live across the community.

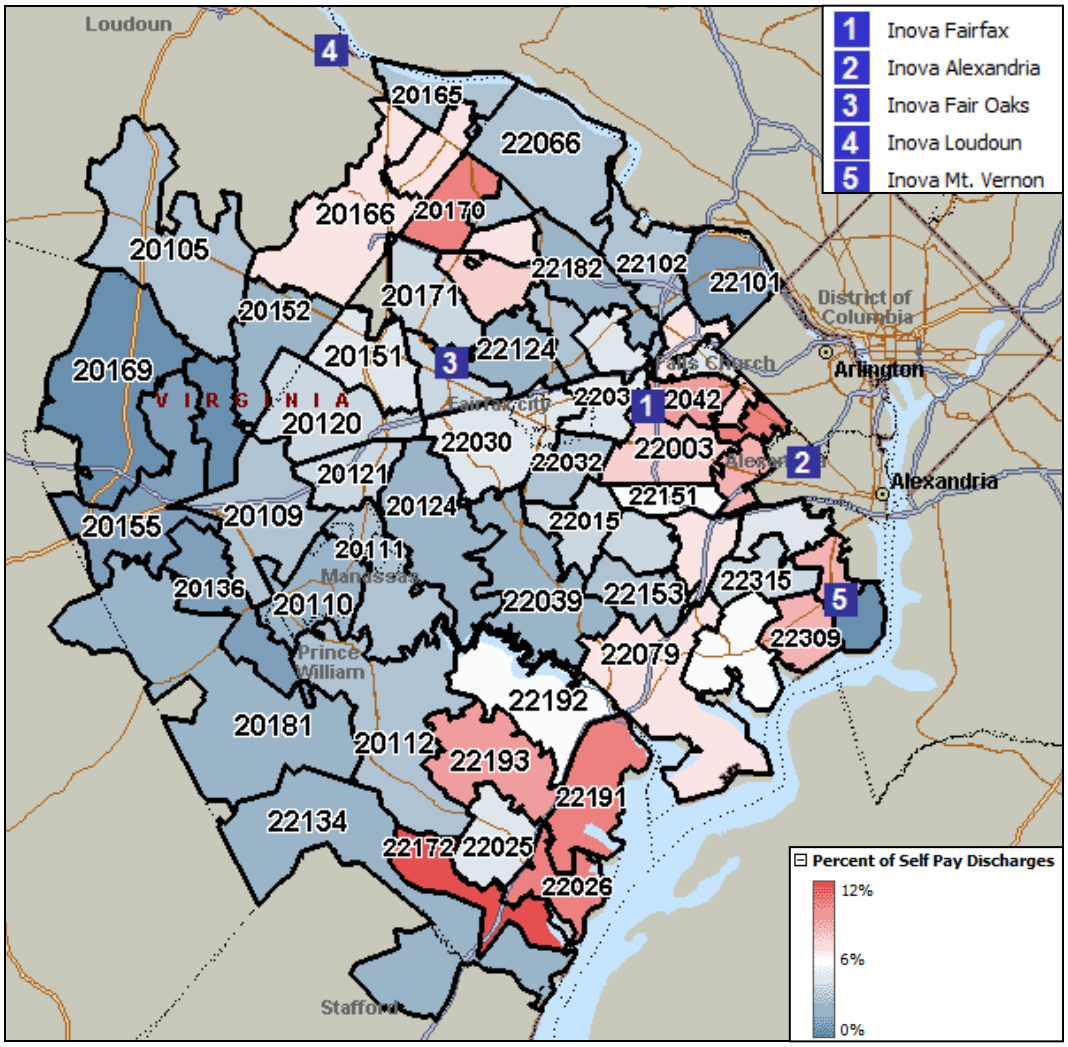
Exhibit 29: Community-Wide Discharges by Subregion and Payer, 2010

Subregion	2010 Discharges	Medicaid	Medicare	Other	Private	Self-pay	Unknown/ Missing
Primary Service Area							
Fairfax County Subregions	**61,431**	**10.2%**	**33.0%**	**0.9%**	**50.2%**	**5.4%**	**0.1%**
Annandale/North Springfield	4,581	13.3%	38.3%	1.1%	40.2%	7.2%	0.0%
Centreville	3,297	9.8%	18.6%	1.0%	66.4%	3.7%	0.5%
Chantilly	1,118	13.8%	23.0%	1.0%	57.4%	4.7%	0.1%
Clifton/Fairfax Station	1,550	2.5%	34.1%	0.5%	60.9%	1.8%	0.2%
East Fairfax 29/50 Corridor	4,790	16.0%	31.6%	1.5%	43.4%	7.3%	0.1%
Fairfax City	3,165	6.6%	39.4%	0.8%	48.6%	4.3%	0.2%
Franconia/Kingstowne	3,082	6.8%	33.5%	0.7%	54.3%	4.6%	0.1%
GMU/Burke	3,713	5.1%	34.8%	0.8%	56.0%	3.3%	0.0%
Lincolnia/Bailey's Crossroads	3,846	19.3%	29.7%	0.9%	40.5%	9.2%	0.3%
Lorton/Newington	1,583	12.1%	24.3%	1.5%	55.7%	6.2%	0.2%
McLean/Great Falls	3,173	1.8%	46.7%	1.0%	48.1%	2.4%	0.0%
Mt. Vernon South/Ft. Belvoir	5,936	17.4%	37.0%	1.0%	37.6%	7.0%	0.1%
Oakton/Fair Lakes/South Herndon	5,010	5.5%	26.3%	0.4%	64.2%	3.4%	0.1%
Reston/Herndon	6,467	10.2%	28.9%	0.7%	52.4%	7.7%	0.1%
Springfield	5,334	9.8%	37.2%	1.1%	47.3%	4.5%	0.1%
Vienna	3,499	5.4%	36.6%	0.5%	54.2%	3.3%	0.0%
West Falls Church	1,287	9.2%	31.4%	1.2%	51.9%	6.2%	0.1%
Falls Church City Subregions	**810**	**5.7%**	**39.9%**	**1.0%**	**48.9%**	**4.6%**	**0.0%**
West Falls Church	810	5.7%	39.9%	1.0%	48.9%	4.6%	0.0%
Loudoun County Subregions	**1,579**	**3.3%**	**15.0%**	**0.8%**	**78.5%**	**2.4%**	**0.0%**
South Riding/Aldie	1,579	3.3%	15.0%	0.8%	78.5%	2.4%	0.0%
Prince William County Subregions	**3,497**	**10.1%**	**27.5%**	**1.9%**	**53.7%**	**2.8%**	**4.0%**
Manassas East	3,497	10.1%	27.5%	1.9%	53.7%	2.8%	4.0%
Primary Service Area Total	**67,317**	**10.0%**	**32.4%**	**1.0%**	**51.1%**	**5.2%**	**0.3%**
Secondary Service Area							
Fairfax County Subregions							
Dulles International Airport	-	-	-	-	-	-	-
Loudoun County Subregions	**4,720**	**12.0%**	**25.3%**	**0.8%**	**56.5%**	**5.3%**	**0.1%**
Sterling/Dulles	4,720	12.0%	25.3%	0.8%	56.5%	5.3%	0.1%
Manassas City Subregions	**3,107**	**13.6%**	**28.8%**	**1.8%**	**47.4%**	**2.3%**	**6.1%**
Manassas West	3,107	13.6%	28.8%	1.8%	47.4%	2.3%	6.1%
Prince William County Subregions	**22,377**	**13.2%**	**25.7%**	**2.0%**	**51.4%**	**6.2%**	**1.6%**
Dale City/Dumfries/Quantico	7,699	15.8%	23.0%	2.1%	49.6%	8.7%	0.9%
Gainesville/Haymarket/Bull Run	4,613	3.7%	30.8%	1.4%	60.9%	1.2%	2.0%
Lake Ridge/Occoquan	3,254	9.2%	28.3%	2.0%	54.5%	5.5%	0.5%
Manassas West	2,594	19.0%	23.1%	2.2%	47.1%	2.6%	6.0%
Woodbridge	4,217	18.2%	24.6%	2.2%	44.5%	9.9%	0.6%
Secondary Service Area Total	**30,204**	**13.0%**	**26.0%**	**1.8%**	**51.8%**	**5.7%**	**1.8%**
Combined Service Areas Total	**97,521**	**10.9%**	**30.4%**	**1.2%**	**51.3%**	**5.3%**	**0.8%**

Source: Health Systems Agency of Northern Virginia, 2011.

Medicaid and self-pay discharges were most prevalent in Manassas City and in certain areas of Prince William and Fairfax counties (e.g., Bailey's Crossroads, Mt. Vernon, Manassas) (**Exhibits 30, 31, and 32**).

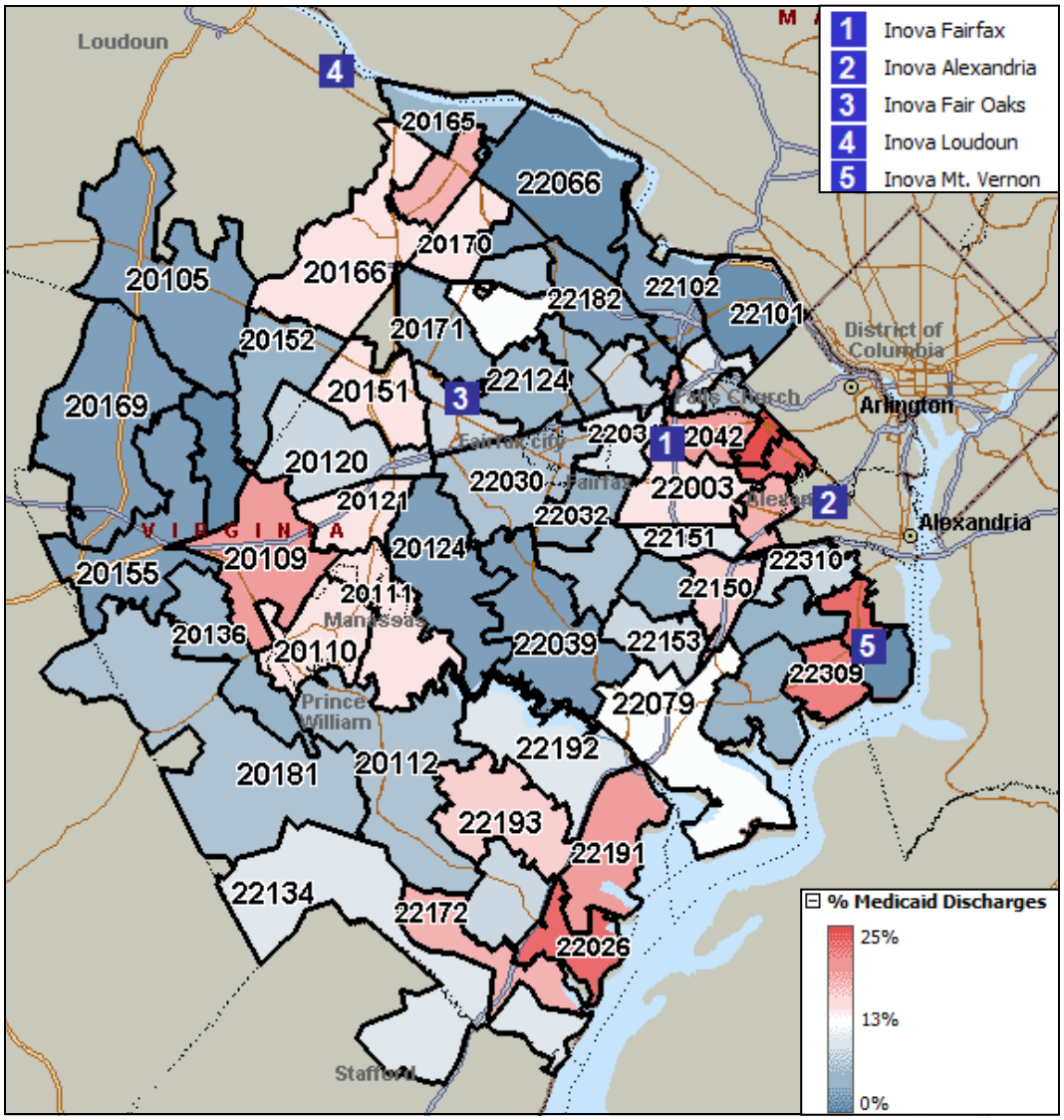
Exhibit 30: Distribution of Self-pay Discharges by ZIP Code, 2010



Sources: Microsoft MapPoint and Health Systems Agency of Northern Virginia, 2011.

A comparatively high proportion of self-pay discharges were found in Reston/Herndon (ZIP codes 20192 and 20170) and Dale City/Dumfries/Quantico (ZIP codes 22172 and 22026)

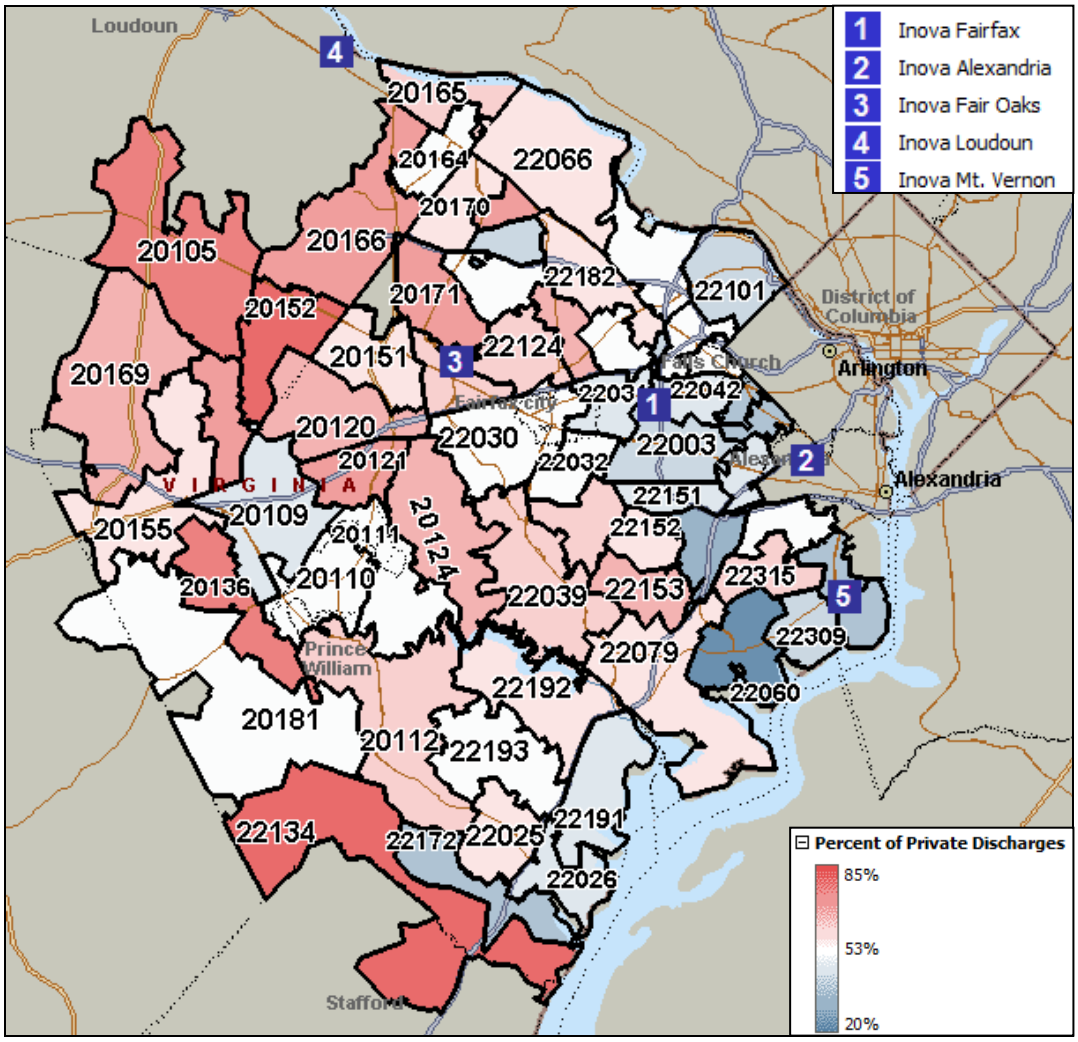
Exhibit 31: Distribution of Medicaid Discharges by ZIP Code, 2010



Sources: Microsoft MapPoint and Health Systems Agency of Northern Virginia, 2011.

Medicaid discharges were prevalent in Lincolnia/Bailey's Crossroads (ZIP code 22041), East Fairfax 29/50 Corridor (ZIP code 22044), Mt. Vernon South/Ft. Belvoir (ZIP codes 22306 and 22309), and Dale City/Dumfries/Quantico (ZIP code 22026)

Exhibit 32: Distribution of Private Discharges by ZIP Code, 2010



Sources: Microsoft MapPoint and Health Systems Agency of Northern Virginia, 2011.

51% of community discharges were for patients with private coverage

…

The greatest proportions of private discharges originated from South Riding/Aldie (ZIP Codes 20152 and 20105)

County/City-Level Health Status and Access Indicators

The following secondary data sources have been used to examine county-level and city-level health status and access indicators in the Inova Fairfax community: (1) County Health Rankings, (2) Community Health Status Indicators Project, (3) Virginia Department of Health, and (4) the Behavioral Risk Factor Surveillance System.

1. County Health Rankings

County Health Rankings, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, ranks each county within each state (or commonwealth) in terms of health factors and health outcomes. The health outcomes measure is a composite based on mortality and morbidity statistics, and the health factors measure is a composite of several variables known to affect health outcomes: health behaviors, clinical care, social and economic factors, and physical environment.

County Health Rankings is updated annually. *County Health Rankings 2012* relies on data from 2002 to 2010, with most data originating in 2006 to 2009. *County Health Rankings 2011* relies on data from 2001 to 2009, with most data originating in 2006 to 2008. In 2011, *County Health Rankings* was able to rank 132 of Virginia's 134 counties. In 2012, *County Health Rankings* ranked 131 counties.

Exhibit 33 provides a summary analysis of the rankings for counties and cities in Inova Fairfax's community. Rankings for Virginia were divided into quartiles to indicate how each county ranks versus others in the commonwealth. **Exhibit 33** illustrates the quartile into which each area fell by indicator in the 2012 edition, and also illustrates whether an area's ranking worsened or improved from 2011. For example, in the 2012 edition, Fairfax County was in the top half (3rd out of 131) of Virginia counties and independent cities for the overall rate of mortality; however, its ranking in 2012 fell for this indicator compared to the 2011 edition.

Exhibit 33A: County-Level Health Status and Access Indicators

Indicator	Fairfax City	Rank Change 2011 to 2012	Fairfax County	Rank Change 2011 to 2012	Falls Church City	Rank Change 2011 to 2012
Health Outcomes	↓	8 to 34		1 to 1		64 to 28
Mortality	↓	21 to 63	↓	1 to 3		71 to 54
Morbidity	↓	1 to 8		3 to 3		51 to 6
Health Factors	↓	3 to 8		9 to 7		12 to 6
Health Behaviors	↓	3 to 9	↓	2 to 4		36 to 27
Tobacco Use		1 to 1	↓	7 to 10		48 to 43
Diet and Exercise*	↓	N/A		N/A		N/A
Alcohol Use		43 to 38	↓	61 to 84	↓	60 to 76
Sexual Activity	↓	18 to 83		5 to 5	↓	14 to 45
Clinical Care		117 to 49		28 to 15		3 to 2
Access to Care		126 to 70		38 to 9		3 to 2
Quality of Care		76 to 32	↓	48 to 55		30 to 24
Social & Economic Factors	↓	5 to 10		3 to 3		13 to 2
Education	↓	3 to 12	↓	5 to 7		10 to 1
Employment		11 to 9	↓	3 to 4		48 to 24
Income		8 to 8		7 to 7		1 to 1
Family and Social Support		27 to 25		10 to 7		17 to 17
Community Safety		53 to 49		15 to 13		85 to 85
Physical Environment	↓	1 to 4		132 to 131	↓	96 to 116
Environmental Quality		111 to 110		132 to 131		131 to 130
Built Environment*		N/A		N/A		N/A

Alcohol Use and Community Safety ranked poorly in 4 of 7 areas

…

All jurisdictions ranked in the bottom quartile for Environmental Quality

Source: *County Health Rankings*, 2011 and 2012.

*The 2012 edition of County Health Rankings used different data sources for the "Diet and Exercise" and "Built Environment" indicators than the 2011 edition. Therefore, it is not possible to draw comparisons between years for these indicators.

Key	
2012 County Ranking 1 - 66	
2012 County Ranking 67 - 98	
2012 County Ranking 99 -131	
Ranks Not Comparable Between 2011 and 2012	N/A
Rank Worsened from 2011 to 2012	↓

Exhibit 33B: County-Level Health Status and Access Indicators

Indicator	Loudoun County	Rank Change 2011 to 2012	Manassas City	Rank Change 2011 to 2012	Manassas Park City	Rank Change 2011 to 2012	Prince William County	Rank Change 2011 to 2012
Health Outcomes		3 to 3	↓	9 to 13		12 to 12		11 to 11
Mortality		3 to 1		16 to 16		12 to 10	↓	7 to 8
Morbidity	↓	9 to 12	↓	4 to 18	↓	24 to 26	↓	30 to 33
Health Factors		1 to 1	↓	60 to 66		69 to 57		32 to 25
Health Behaviors		4 to 2	↓	49 to 51		72 to 54		52 to 24
Tobacco Use		9 to 7		48 to 43		48 to 43		35 to 33
Diet and Exercise*		N/A		N/A		N/A		N/A
Alcohol Use		79 to 72	↓	22 to 24		9 to 9	↓	66 to 78
Sexual Activity		4 to 2		102 to 99		109 to 100		65 to 55
Clinical Care		17 to 11		76 to 54		121 to 100		95 to 61
Access to Care		16 to 7		64 to 39	↓	85 to 111		69 to 37
Quality of Care	↓	45 to 62		93 to 88		121 to 84		104 to 94
Social & Economic Factors		1 to 1	↓	70 to 83		46 to 41		18 to 17
Education	↓	1 to 2	↓	97 to 117		89 to 77		32 to 26
Employment		2 to 2		55 to 54		22 to 19	↓	11 to 12
Income		2 to 2	↓	41 to 55	↓	33 to 35		11 to 10
Family and Social Support		1 to 1		75 to 73	↓	49 to 61	↓	46 to 59
Community Safety		26 to 23		122 to 121		99 to 73		73 to 72
Physical Environment		119 to 117	↓	37 to 76		114 to 103	↓	70 to 90
Environmental Quality		127 to 126		111 to 110		111 to 110		111 to 110
Built Environment*		N/A		N/A		N/A		N/A

Source: *County Health Rankings*, 2011 and 2012.

*The 2012 edition of County Health Rankings used different data sources for the "Diet and Exercise" and "Built Environment" indicators than the 2011 edition. Therefore, it is not possible to draw comparisons between years for these indicators.

Key	
2012 County Ranking 1 - 66	
2012 County Ranking 67 - 98	
2012 County Ranking 99 -131	
Ranks Not Comparable Between 2011 and 2012	N/A
Rank Worsened from 2011 to 2012	↓

For the Inova Fairfax community, the indicators that most frequently ranked in the bottom one-half of Virginia jurisdictions include Alcohol Use,[10] Community Safety,[11] and Environmental Quality.[12]All areas ranked in the bottom quartile for Environmental Quality.

Manassas Park City had the highest number of unfavorable indicators, ranking in the bottom one-half of Virginia jurisdictions on the following: Diet and Exercise,[13] Sexual Activity,[14] Access to Care,[15] Quality of Care,[16] Education,[17] Community Safety, Environmental Quality, and Built Environment.[18]

2. Community Health Status Indicators Project

The *Community Health Status Indicators* (CHSI) Project, provided by the U.S. Department of Health and Human Services, compares many health status and access indicators to both the median rates in the U.S. and to rates in "peer counties" or cities across the U.S.

Counties or jurisdictions are considered "peers" if they share common characteristics such as population size, poverty rate, average age, and population density. **Exhibit 34** highlights the analysis of CHSI health status indicators. Cells in the table are shaded if, on that indicator, a city or county compared unfavorably both to the U.S. as a whole and to the group of specified peer communities.

[10] A composite measure that examines the percent of adults who report heavy or binge drinking and the motor vehicle crash death rate per 100,000 population.
[11] A measure that examines the violent crime rate.
[12] A composite measure that examines the number of air pollution-particulate matter days and air pollution-ozone days.
[13] A composite measure that examines adult obesity and physical inactivity.
[14] A composite measure that examines the chlamydia rate per 100,000 population and the teen birth rate per 1,000 females ages 15 to 19.
[15] A composite measure that examines the percent of the population without health insurance and ratio of population to primary care physicians.
[16] A composite measure that examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.
[17] A composite measure that examines high school graduation rates and the percent of adults with some post-secondary education.
[18] A composite measure that examines access to healthy foods and recreational facilities and the percent of restaurants that are for fast food.

Exhibit 34: Unfavorable CHSI Indicators

Indicator	Fairfax City	Fairfax County	Falls Church City	Loudoun County	Manassas City	Manassas Park City	Prince William County
Low Birth Weight Infants							
Very Low Birth Weight Infants			■				
Premature Births							
No Care in First Trimester					■	■	■
Births to Women Under 18						■	
Births to Women Age 40-54*	■	■	■	■			
Births to Unmarried Women							
Infant Mortality							
Hispanic Infant Mortality	■			■			
White non-Hispanic Infant Mortality							
Black non-Hispanic Infant Mortality				■	■		
Neonatal Infant Mortality							■
Post-neonatal Infant Mortality			■				
Breast Cancer (Female)	■		■	■	■		
Colon Cancer	■					■	
Lung Cancer	■					■	
Coronary Heart Disease							
Stroke					■	■	
Homicide	■				■		
Suicide							
Motor Vehicle Injuries			■				
Unintentional Injury			■				

Key	
■	Unfavorable

Source: *The Community Health Status Indicators Project*, 2010.
* The Community Health Status Indicators Project considers a high number of births to women age 40-54 to be an unfavorable health outcome. Caution should be used when interpreting this indicator; women may be choosing to delay having children to pursue career or educational goals.

Overall, Fairfax, Loudoun, and Prince William counties compared relatively favorably to U.S. and peer county benchmarks. Fairfax and Falls Church cities compared unfavorably on the highest number of indicators, with six each.

Births to women age 40-54 and breast cancer (female) compared unfavorably in four of the seven areas. No care in the first trimester compared unfavorably in three of the jurisdictions.

3. Virginia Department of Health

The Virginia Department of Health (VDH) maintains a publicly-available data warehouse that includes indicators regarding a number of health issues. **Exhibit 35** compares each area's rates for leading causes of death to Virginia averages. **Exhibits 36 through 39** allow assessing racial and ethnic disparities associated with cancer, cardiovascular disease, injury, and other causes of death. **Exhibits 40 through 43** provide information on cancer incidence rates, sexually transmitted infection diagnosis rates, the number of residents living with HIV, and reported cases of tuberculosis. **Exhibits 44 and 45** provide information on maternal and child health indicators by race.

Exhibit 35: Leading Causes of Death, 2010

Death Rates*	Fairfax City	Fairfax County	Falls Church City	Loudoun County	Manassas City	Manassas Park City	Prince William County	Virginia
Deaths From All Causes	712.6	510.1	463	522.3	765.3	677.8	650.5	**739.2**
Malignant Neoplasms	171.5	128.5	76.4	138.6	159.9	130.1	154.7	**170.9**
Diseases Of The Heart	134.7	108.6	92.4	116.1	139.8	153.0	144.3	**167.6**
Cerebrovascular Diseases	36.9	27.1	33.6	25.2	36.2	44.4	37.8	**41.7**
Chronic Lower Respiratory Disease	25.5	22.9	-	16.9	70.9	-	26.4	**37.9**
Unintentional Injury	42.5	18.3	37.1	14.9	21.0	38.1	27.4	**32.2**
Alzheimer's Disease	3.4	11.6	14.2	18.2	37.9	18.8	17.2	**24.4**
Nephritis And Nephrosis	34.2	12.2	-	10.0	36.0	23.1	17.1	**20.1**
Diabetes	23.9	11.5	15.9	12.1	21.1	49.5	12.2	**18.7**
Septicemia	24.7	15.2	7.1	7.8	11.4	27.0	16.1	**17.2**
Influenza And Pneumonia	7.5	10.5	26.6	11.9	55.8	23.1	16.2	**15.3**
Suicide	26.1	7.4	-	9.2	14.7	6.7	10.7	**11.9**
Chronic Liver Disease	3.9	4.0	-	5.4	4.3	18.8	7.1	**7.8**
Primary Hypertension And Renal Disease	11.9	6.8	-	5.6	3.0	18.8	12.1	**7.5**
Parkinson's Disease	7.8	8.3	7.1	7.2	10.8	23.1	8.5	**6.9**

Key	
Better than VA	
0%-25% worse than VA	
25% to 75% worse than VA	
>75% worse than VA	

Source: Virginia Department of Health, 2012.
Rates are per 100,000 population and are not age-adjusted.

According to VDH, Fairfax City compared unfavorably to Virginia on ten indicators. Three indicators were more than 75 percent worse than Virginia **(Exhibit 36).**

Exhibit 36 portrays 2010 cancer mortality rates by race. Cells are shaded if the rate for a cohort within one of the counties presented exceed the Virginia average for that cohort.

Exhibit 36: Cancer Mortality Rates by Race, 2010

Jurisdiction and Race	Colorectal	Pancreas	Lung and Bronchus	Breast (Male and Female)	Cervical and Uterine	Prostate	Non-Hodgkin's Lymphoma	Leukemia
Fairfax County								
White	10.5	7.5	27.9	10.0	8.5	8.4	6.1	5.5
Black	9.1	7.3	16.3	12.7	7.3	1.8	4.5	5.4
Other*	6.9	3.7	9.6	4.6	1.4	0.0	3.7	3.7
Total	**9.7**	**6.7**	**23.2**	**9.2**	**7.0**	**6.1**	**5.5**	**5.1**
Loudoun County								
White	11.9	4.7	20.0	9.4	3.4	4.7	2.1	2.1
Black	15.8	15.8	51.3	11.8	7.9	7.9	3.9	7.9
Other*	0.0	1.9	7.7	0.0	1.9	5.8	0.0	1.9
Total	**10.2**	**5.1**	**20.5**	**8.0**	**3.5**	**5.1**	**1.9**	**2.6**
Prince William County								
White	9.3	6.1	33.0	8.6	4.8	3.5	2.6	3.5
Black	8.2	1.0	18.5	4.1	6.2	3.1	3.1	3.1
Other*	11.2	4.5	18.0	2.2	2.2	0.0	2.2	2.2
Total	**9.2**	**4.8**	**28.4**	**7.0**	**4.8**	**3.1**	**2.6**	**3.3**
Virginia								
White	15.9	11.7	54.6	12.9	8.6	8.2	6.2	7.0
Black	17.3	10.2	42.4	16.2	8.7	13.0	4.3	4.0
Other*	6.5	3.5	13.9	3.7	2.6	1.5	2.8	3.2
Total	**15.5**	**10.9**	**49.4**	**12.9**	**8.2**	**8.7**	**5.6**	**6.1**

Key	
Higher Than VA Average	

Source: Virginia Department of Health, 2012.
Rates are per 100,000 population and are not age-adjusted.
* The "Other" population includes residents who identify as American Indian/Native American, Asian/Pacific Islander, two or more races, or some other race.

In the community, the non-White population compared unfavorably to Virginia averages for various cancer mortality rates. The White population in Fairfax County had higher rates of prostate cancer than the Virginia average.

Within the community, Fairfax County had the highest mortality rates for pancreatic, breast, cervical and uterine, and prostate cancers, and for non-Hodgkin's lymphoma and leukemia. Black residents had higher mortality rates for breast cancer in Fairfax County, all cancers in Loudoun County, and cervical and uterine cancer and non-Hodgkin's lymphoma in Prince William County.

Exhibit 37: Cardiovascular Disease Mortality Rates by Race, 2010

Jurisdiction and Race	All Major Cardio-vascular Diseases	All Diseases of the Heart	Hypertensive Heart And Renal Diseases	Ischemic Heart Diseases	All Other Diseases of the Heart
Fairfax County					
White	136.9	102.7	4.9	50.2	47.6
Black	90.8	69.9	5.4	34.5	30.0
Other*	58.7	37.6	2.3	22.0	13.3
Total	**117.0**	**86.8**	**4.5**	**43.2**	**39.1**
Loudoun County					
White	89.3	70.1	2.1	41.7	26.4
Black	114.5	94.8	0.0	47.4	47.4
Other*	25.1	15.5	0.0	11.6	3.9
Total	**80.7**	**63.1**	**1.6**	**37.1**	**24.3**
Prince William County					
White	116.9	89.7	2.2	50.6	36.8
Black	82.3	57.6	3.1	28.8	25.7
Other*	53.9	33.7	0.0	26.9	6.7
Total	**103.3**	**77.3**	**2.2**	**43.6**	**31.5**
Virginia					
White	236.0	179.6	6.4	106.0	67.2
Black	223.5	161.9	10.7	84.7	66.6
Other*	60.9	41.0	1.7	26.2	13.2
Total	**221.6**	**166.6**	**6.9**	**96.3**	**63.4**

Key	
Higher Than VA Average	

Source: Virginia Department of Health, 2012.
Rates are per 100,000 population and are not age-adjusted.
* The "Other" population includes residents who identify as American Indian/Native American, Asian/Pacific Islander, two or more races, or some other race.

The "Other" (non-White, non-Black) population compared unfavorably to Virginia for mortality associated with hypertensive heart and renal diseases and "all other diseases of the heart" in Fairfax County and ischemic heart diseases in Prince William County.

Within the community, Fairfax County had the highest mortality rate of cardiovascular disease with the exception of ischemic heart disease. Black residents had higher mortality rates for hypertensive heart and renal diseases in Fairfax and Prince William counties and all but one cardiovascular disease type in Loudoun County (**Exhibit 37**).

Exhibit 38: Injury Mortality Rates by Race, 2010

Jurisdiction and Race	Unintentional Injuries, Total	Motor Vehicle Accidents	Accidental Falls, Firearms, And Drowning	Accidental Poisoning and Noxious Substances	All Other Unintentional Injuries	Suicide	Homicide
Fairfax County							
White	20.3	4.6	7.6	3.4	4.7	9.6	1.0
Black	13.6	1.8	3.6	2.7	5.4	3.6	0.9
Other*	7.8	1.8	5.0	0.0	0.9	4.6	4.1
Total	**17.2**	**3.8**	**6.7**	**2.7**	**4.0**	**8.1**	**1.6**
Loudoun County							
White	13.6	4.7	3.0	2.1	3.8	9.4	0.4
Black	11.8	7.9	0.0	0.0	3.9	3.9	0.0
Other*	1.9	1.9	0.0	0.0	0.0	1.9	0.0
Total	**11.5**	**4.5**	**2.2**	**1.6**	**3.2**	**7.7**	**0.3**
Prince William County							
White	23.7	5.4	8.6	5.8	3.8	11.8	2.2
Black	16.5	7.2	5.1	4.1	0.0	7.2	5.1
Other*	4.5	2.2	2.2	0.0	0.0	6.7	0.0
Total	**20.3**	**5.5**	**7.3**	**4.8**	**2.6**	**10.4**	**2.6**
Virginia							
White	36.3	9.5	9.3	8.2	9.3	14.7	2.6
Black	25.7	9.1	3.9	4.8	7.9	5.8	12.4
Other*	7.1	2.0	3.7	0.2	1.1	5.8	2.6
Total	**32.1**	**8.9**	**7.8**	**6.9**	**8.4**	**12.3**	**4.6**

Key
Higher Than VA Average

Source: Virginia Department of Health, 2012.
Rates are per 100,000 population and are not age-adjusted.
* The "Other" population includes residents who identify as American Indian/Native American, Asian/Pacific Islander, two or more races, or some other race.

Overall (and compared to rates in the commonwealth), mortality due to unintentional injuries is comparatively low in Fairfax, Loudoun, and Prince William counties (**Exhibit 38**).

Exhibit 39: Other Mortality Rates by Race, 2010

Jurisdiction and Race	Diabetes Mellitus	Parkinson's Disease	Alzheimer's Disease	Cerebro-vascular Diseases	Influenza And Pneumonia	CLRD	Chronic Liver Disease and Cirrhosis
Fairfax County							
White	10.7	7.9	10.9	23.5	10.4	22.5	5.1
Black	12.7	2.7	2.7	18.2	0.9	6.4	3.6
Other*	7.3	0.9	2.8	17.0	4.1	4.1	0.5
Total	**10.2**	**6.0**	**8.5**	**21.7**	**8.2**	**17.3**	**4.0**
Loudoun County							
White	5.1	3.8	10.6	13.6	7.2	11.5	3.4
Black	15.8	0.0	3.9	15.8	0.0	0.0	11.8
Other*	9.7	1.9	0.0	7.7	1.9	0.0	3.9
Total	**6.7**	**3.2**	**8.3**	**12.8**	**5.8**	**8.6**	**4.2**
Prince William County							
White	8.3	5.1	9.9	20.2	10.6	18.6	5.4
Black	13.4	3.1	4.1	17.5	6.2	4.1	0.0
Other*	4.5	2.2	2.2	15.7	2.2	4.5	9.0
Total	**9.0**	**4.4**	**7.9**	**19.2**	**8.8**	**14.1**	**4.6**
Virginia							
White	17.5	8.1	27.6	42.0	16.6	44.8	9.8
Black	28.7	2.5	13.5	44.2	11.8	19.8	6.8
Other*	6.5	1.1	2.6	16.3	3.9	4.6	1.5
Total	**19.1**	**6.5**	**23.0**	**40.7**	**14.8**	**37.0**	**8.6**

Key	
Higher Than VA Average	

Source: Virginia Department of Health, 2012.
Rates are per 100,000 population and are not age-adjusted.
* The "Other" population includes residents who identify as American Indian/Native American, Asian/Pacific Islander, two or more races, or some other race.

Suicide rates are highest within White populations across the community; however, these rates generally are lower than Virginia averages. Black mortality rates associated with diabetes are comparatively high across all areas; mortality due to chronic liver disease and cirrhosis is particularly high for this group in Loudoun County (**Exhibit 39**).

Exhibit 40: Cancer Incidence by Jurisdiction, 2004-2008

Cancer Incidence	Fairfax County	Loudoun County	Prince William County	Virginia
Breast				
Count	3,597	642	972	26,319
Rate/100,000	131.9	119.5	115.0	124.2
Health District Rank	6	26	29	-
Cervical				
Count	175	34	64	1,356
Rate/100,000	6.4	5.4	6.9	6.7
Health District Rank	23	29	18	-
Colorectal				
Count	1,669	288	256	17,092
Rate/100,000	36.9	36.1	41.7	45.1
Health District Rank	32	34	30	-
Lung and Bronchus				
Count	2,045	326	748	25,741
Rate/100,000	47.6	44.7	64.5	68.4
Health District Rank	32	33	29	-
Melanoma				
Count	1,012	205	253	7,848
Rate/100,000	20.4	19.9	16.3	20.3
Health District Rank	18	20	25	-
Oral				
Count	448	78	141	4,095
Rate/100,000	8.9	7.7	9.3	10.4
Health District Rank	31	34	29	-
Ovarian				
Count	332	49	95	2,532
Rate/100,000	12.5	10.8	12.3	12.0
Health District Rank	16	25	18	-
Prostate				
Count	3312	541	953	27,726
Rate/100,000	144.5	140.8	157.7	159.4
Health District Rank	25	26	17	-

Key	
Bottom 50% of VA Health Districts	

Source: Virginia Department of Health, 2008.
Rates are age-adjusted.

Cancer rates in the bottom 50% of Virginia's 35 health districts: breast and ovarian cancer in Fairfax County and prostate cancer in Prince William County

Certain cancer rates in the community are above Virginia averages, for example: breast and ovarian cancer in Fairfax County, and prostate cancer in Prince William (**Exhibit 40**).

Exhibit 41: Sexually Transmitted Infection Diagnoses Rates by Jurisdiction, 2007-2010

Jurisdiction	Chlamydia Diagnosis Rate*				Gonorrhea Diagnosis Rate*				Syphilis Diagnosis Rate*			
	2007	2008	2009	2010	2007	2008	2009	2010	2007	2008	2009	2010
Fairfax City	197.0	281.0	709.5	345.7	12.8	41.9	97.3	26.6	4.3	0.0	4.1	0.0
Fairfax County	124.2	137.7	124.1	134.2	10.7	19.4	16.6	17.5	3.0	3.1	4.0	3.5
Falls Church City	219.2	393.9	560.3	486.5	9.1	62.7	58.5	89.2	0.0	9.0	0.0	8.1
Loudoun County	111.2	136.9	107.2	110.1	7.2	20.7	12.9	18.9	2.9	1.7	1.7	1.3
Manassas City	242.9	394.8	427.2	380.7	31.1	76.7	54.8	50.2	2.8	5.7	5.5	0.0
Manassas Park City	201.3	229.7	174.4	133.1	8.8	17.7	33.2	21.0	0.0	0.0	0.0	0.0
Prince William County	231.7	287.9	268.2	252.0	34.4	54.6	43.0	36.6	3.1	5.2	4.2	3.5
Virginia	**329.8**	**391.0**	**395.9**	**393.2**	**88.4**	**129.3**	**99.1**	**89.6**	**5.3**	**6.6**	**7.0**	**6.5**

Key
Better than VA
0%-25% worse than VA
25% to 75% worse than VA
>75% worse than VA

Source: Virginia Department of Health, 2011.
Rates are per 100,000 population.

The Inova Fairfax community reported comparatively high diagnosis rates of chlamydia in Fairfax City, Falls Church City, and Manassas City. In 2010, Falls Church City reported diagnosis rates of chlamydia and syphilis that were higher than the Virginia rate (**Exhibit 41**).

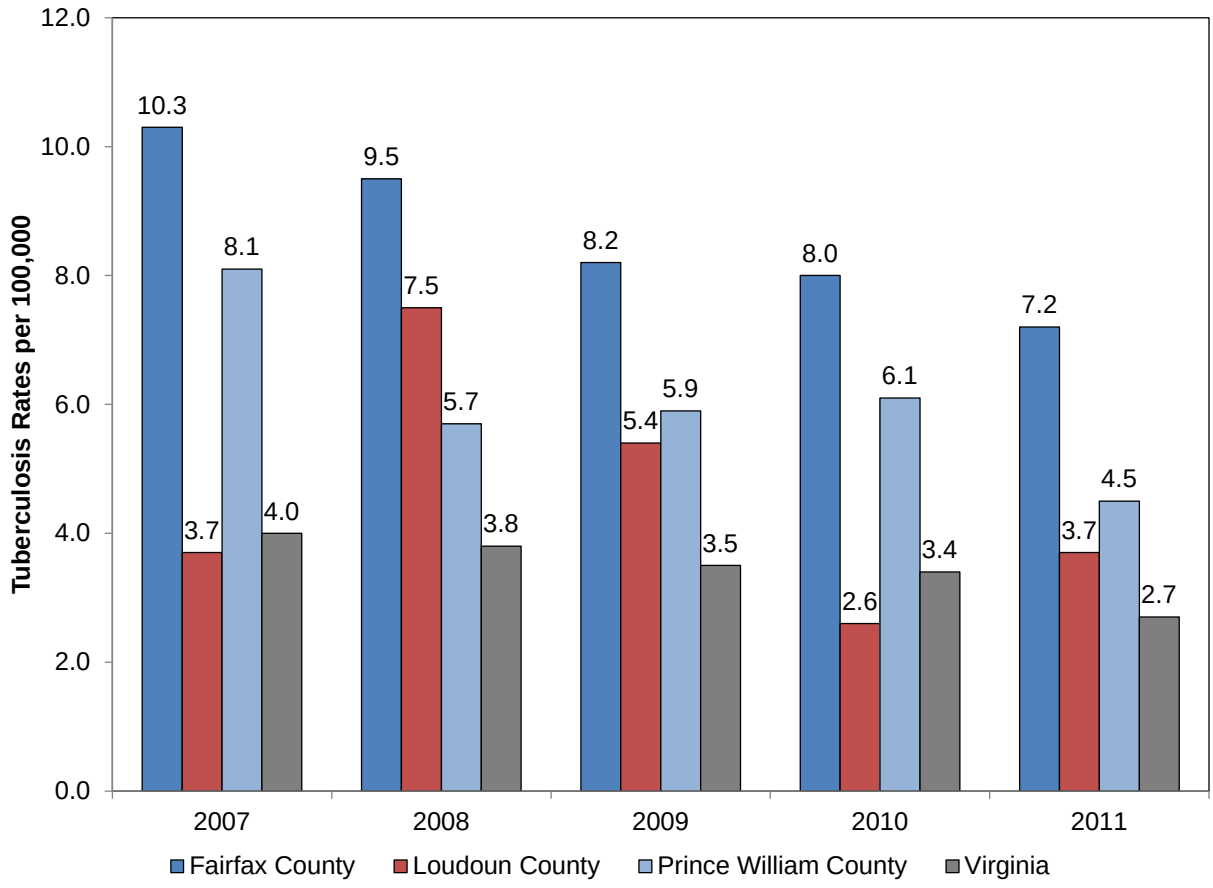
Exhibit 42: Residents Living with HIV by Jurisdiction, 2011

Jurisdiction	HIV Only	AIDS	All Cases of HIV/AIDS	
	Number	Number	Number	Rate*
Falls Church City	81	116	197	1,597.5
Fairfax City	118	119	237	1,050.3
Manassas City	101	125	226	597.6
Prince William County	373	428	801	199.3
Fairfax County	934	981	1,915	177.0
Manassas Park City	10	9	19	133.1
Loudoun County	153	182	335	107.3
Virginia	**11,930**	**11,878**	**23,808**	**297.6**

Source: Virginia Department of Health, 2011.
Rates per 100,000 population.

In 2011, the cities of Falls Church, Fairfax, and Manassas had higher rates of residents living with HIV/AIDS than the Virginia average (**Exhibit 42**).

Exhibit 43: Reported Tuberculosis Rates by Jurisdiction, 2007-2011



Source: Virginia Department of Health, 2012.

Tuberculosis rates have decreased since 2007. However, incidence rates in Fairfax, Loudoun, and Prince William counties somewhat consistently have exceeded the Virginia average. Fairfax County each year reported the highest tuberculosis rate in the community (**Exhibit 43**).

Exhibit 44: Maternal and Child Health Indicators by Jurisdiction, 2010

Indicator	Fairfax City*	Fairfax County	Falls Church City	Loudoun County	Manassas City*	Manassas Park City*	Prince William County	Virginia
Number of Total Births	328	15,256	118	5,068	670	21	6,647	**102,934**
Percent Non-Marital Births of Total Births	22.6%	22.3%	8.5%	16.3%	43.6%	33.3%	29.9%	**35.5%**
Percent Low Weight Births of Total Births	8.5%	7.0%	10.2%	6.9%	9.0%	4.8%	7.6%	**8.2%**
Percent Very Low Weight Births of Total Births	1.2%	1.1%	3.4%	1.1%	1.0%	0.0%	1.4%	**1.6%**
Percent Without Prenatal Care Began in First 13 Weeks	11.0%	13.9%	16.9%	9.9%	26.1%	33.3%	20.8%	**14.5%**
Teen Pregnancy Rate per 1,000 Females Age 10-19	34.7	8.8	22.9	7.0	41.3	N/A	19.1	**21.1**
Infant Death Rate Per 1,000 Live Births	3.0	4.5	0.0	4.1	3.0	47.6	7.4	**6.8**

Key	
Better than VA	
0%-25% worse than VA	
25% to 75% worse than VA	
>75% worse than VA	

Source: Virginia Department of Health, 2012.
*Rates may be distorted in Fairfax City, Manassas City, and Manassas Park City due to small sample sizes.

Fairfax and Loudoun counties have reported comparatively favorable maternal and child health indicators. Women in a few communities (Manassas and Manassas Park cities, Prince William County, and Falls Church City) have not been receiving adequate prenatal care in the first 13 weeks of pregnancy (**Exhibit 44**).

Exhibit 45: Maternal and Child Health Indicators by Race, 2010

Jurisdiction and Race	% Non-Marital Births of Total Births	% Low Weight Births of Total Births	% Very Low Weight Births of Total Births	Teen Pregnancy Rate per 1,000 Females Age 10-19	Infant Death Rate Per 1,000 Live Births
Fairfax City**					
White	26.9%	9.0%	1.3%	36.4	4.3
Black	33.3%	9.5%	4.8%	66.7	0.0
Other*	5.5%	6.8%	0.0%	17.2	0.0
Total	**22.6%**	**8.5%**	**1.2%**	**34.7**	**3.0**
Fairfax County					
White	23.8%	6.4%	1.0%	9.3	4.1
Black	43.1%	8.5%	2.3%	13.2	10.4
Other*	8.4%	8.2%	1.0%	4.4	3.2
Total	**22.3%**	**7.0%**	**1.1%**	**8.8**	**4.5**
Falls Church City					
White	8.2%	9.2%	4.1%	21.8	0.0
Black	25.0%	0.0%	0.0%	17.5	0.0
Other*	6.3%	18.8%	0.0%	34.1	0.0
Total	**8.5%**	**10.2%**	**3.4%**	**22.9**	**0.0**
Loudoun County					
White	17.6%	6.3%	1.0%	7.7	3.9
Black	34.8%	7.7%	2.3%	6.7	10.3
Other*	5.0%	8.7%	1.0%	3.0	2.8
Total	**16.3%**	**6.9%**	**1.1%**	**7.0**	**4.1**
Manassas City**					
White	41.4%	8.4%	1.0%	39.7	3.8
Black	63.8%	12.8%	1.1%	47.3	0.0
Other*	28.0%	8.0%	2.0%	40.5	0.0
Total	**43.6%**	**9.0%**	**1.0%**	**41.3**	**3.0**
Manassas Park City**					
White	29.4%	5.9%	0.0%	N/A	58.8
Black	100.0%	0.0%	0.0%	N/A	0.0
Other*	0.0%	0.0%	0.0%	N/A	0.0
Total	**33.3%**	**4.8%**	**0.0%**	N/A	**47.6**
Prince William County					
White	27.1%	6.3%	1.1%	18.2	6.6
Black	46.3%	11.0%	2.7%	24.6	11.2
Other*	16.1%	9.1%	0.9%	9.8	4.9
Total	**29.9%**	**7.6%**	**1.4%**	**19.1**	**7.4**
Virginia					
White	27.8%	6.9%	1.2%	16.7	4.9
Black	66.3%	12.5%	3.0%	34.9	14.6
Other*	21.3%	8.1%	1.3%	15.4	2.5
Total	**35.5%**	**8.2%**	**1.6%**	**21.1**	**6.8**

Key	
Higher Than VA Average	

Source: Virginia Department of Health, 2012.

* The "Other" population includes residents who identify as American Indian/Native American, Asian/Pacific Islander, two or more races, or some other race.

**Rates may be distorted in Fairfax City, Manassas City, and Manassas Park City due to small sample sizes.

Black residents throughout the community and throughout the commonwealth have experienced significant maternal and child health disparities (**Exhibit 45**).

4. Behavioral Risk Factor Surveillance System

Data collected by the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) are based on a telephonic survey that gathers data on various health indicators, risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire U.S. Analysis of BRFSS data can identify localized health issues and trends, and enable county, state (or commonwealth), or nation-wide comparisons. **Exhibit 46** compares various BRFSS indicators for the community served by Inova Fairfax, Virginia, and the U.S. Indicators are shaded if an area's values compare unfavorably to Virginia averages.

Exhibit 46A: BRFSS Indicators and Variation from the Commonwealth of Virginia, 2010

Indicator		Fairfax County	Fairfax City*	Virginia	U.S.
Health Behaviors	Binge Drinkers**	12.7%	4.3%	9.7%	10.1%
	Heavy Drinkers***	8.9%	4.3%	4.4%	4.4%
	Current Smoker	8.9%	8.9%	16.4%	11.5%
	No Physical Activity Past 30 Days	15.8%	21.7%	28.5%	27.4%
Prevention Variables	Women 18+ with No Pap Test in Past 3 Years	14.1%	0.0%	16.0%	20.2%
	Women 40+ with No Mammogram in Past 2 Years	15.8%	4.3%	19.4%	23.6%
Access Variables	Could Not See A Doctor Due to Cost in Past Year	5.1%	5.1%.	11.0%	11.8%
Health Conditions	Told Have Asthma	7.6%	17.4%	8.9%	9.2%
	Told Have Diabetes	11.4%	8.7%	13.1%	12.7%
	Told Have Coronary Heart Disease or Angina	6.3%	4.3%	6.3%	6.6%
	Overweight or Obese	55.7%	78.3%	61.9%	61.9%
Mental Health	Rarely or Never Receiving Needed Social and Emotional Support	4.0%	4.5%	8.4%	8.7%
	Poor Mental Health > 21 Days/Month	1.9%	0.0%	6.3%	N/A
Oral Health	No Dental Care Visit in Past Year	14.6%	13.0%	26.2%	30.3%
	Greater than 6 Teeth Extracted	8.2%	17.4%	13.9%	14.6%
	All Teeth Extracted	1.9%	0.0%	7.8%	8.8%
Overall Health	Limited by Physical, Mental, or Emotional Problems	24.1%	17.4%	25.0%	26.8%
	Poor Physical Health > 21 Days/Month	3.8%	13.0%	9.1%	N/A
	Reported Poor or Fair Health	13.3%	26.1%	19.6%	20.1%

Key	
Better than VA	
0%-25% worse than VA	
25% to 75% worse than VA	
>75% worse than VA	
Small Sample Size	*
Data Not Available	N/A

Source: CDC BRFSS, 2011.
**Adult males having five or more drinks on one occasion; adult females having four or more drinks on one occasion.
***Adult men having more than two drinks per day; adult women having more than one drink per day.

Poor health status indicators include the percent of heavy drinkers and the percent of residents who are overweight or obese

Exhibit 46B: BRFSS Indicators and Variation from the Commonwealth of Virginia, 2010

Indicator		Loudoun County	Manassas City*	Prince William County	Virginia	U.S.
Health Behaviors	Binge Drinkers**	9.3%	0.0%	11.8%	9.7%	10.1%
	Heavy Drinkers***	7.3%	0.0%	4.4%	4.4%	4.4%
	Current Smoker	6.6%	28.6%	13.2%	16.4%	11.5%
	No Physical Activity Past 30 Days	21.2%	0.0%	24.3%	28.5%	27.4%
Prevention Variables	Women 18+ with No Pap Test in Past 3 Years	15.9%	14.3%	11.3%	16.0%	20.2%
	Women 40+ with No Mammogram in Past 2 Years	11.3%	0.0%	14.9%	19.4%	23.6%
Access Variables	Could Not See A Doctor Due to Cost in Past Year	7.3%	0.0%	8.8%	11.0%	11.8%
Health Conditions	Told Have Asthma	6.0%	6.0%	10.3%	8.9%	9.2%
	Told Have Diabetes	6.6%	14.3%	7.4%	13.1%	12.7%
	Told Have Coronary Heart Disease or Angina	4.0%	0.0%	1.5%	6.3%	6.6%
	Overweight or Obese	56.3%	71.4%	64.0%	61.9%	61.9%
Mental Health	Rarely or Never Receiving Needed Social and Emotional Support	7.6%	0.0%	6.1%	8.4%	8.7%
	Poor Mental Health > 21 Days/Month	4.0%	0.0%	5.1%	6.3%	N/A
Oral Health	No Dental Care Visit in Past Year	13.9%	14.3%	14.7%	26.2%	30.3%
	Greater than 6 Teeth Extracted	7.3%	14.3%	8.1%	13.9%	14.6%
	All Teeth Extracted	2.6%	14.3%	2.2%	7.8%	8.8%
Overall Health	Limited by Physical, Mental, or Emotional Problems	17.9%	14.3%	15.4%	25.0%	26.8%
	Poor Physical Health > 21 Days/Month	2.0%	5.1%	5.1%	9.1%	N/A
	Reported Poor or Fair Health	14.6%	14.3%	8.1%	19.6%	20.1%

Key	
Better than VA	
0%-25% worse than VA	
25% to 75% worse than VA	
>75% worse than VA	
Small Sample Size	*
Data Not Available	N/A

Source: CDC BRFSS, 2011.

**Adult males having five or more drinks on one occasion; adult females having four or more drinks on one occasion.

***Adult men having more than two drinks per day; adult women having more than one drink per day

Three areas in the community served by Inova Fairfax report an above average prevalence of heavy drinking and obesity/overweight. Fairfax and Manassas cities had the most indicators (five) that compared unfavorably to the Commonwealth of Virginia, followed by Prince William County (four). Loudoun County had the fewest.

Within the community, three indicators were reported as greater than 75 percent worse than Virginia averages:

- The percent of people who were heavy drinkers in Fairfax County;
- The percent of people who have ever been told by a doctor that they have asthma in Fairfax City; and
- Those reporting having all teeth extracted in Manassas City.

Overall, Virginia compared unfavorably to the U.S. on the percent of people who were current smokers, the percent of people with no physical activity in the past 30 days, and the percent of people who have ever been told by a doctor that they have diabetes.

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for ACSC throughout the community and at the hospital.

The methodologies for quantifying discharges for ACSC have been well-tested for more than a decade. The methodologies quantify inpatient admissions for diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, asthma, and other conditions that, in theory, could have been prevented if adequate ambulatory (primary) care resources were available and accessed by those patients.[19]

Disproportionately large numbers of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care services. The Agency for Healthcare Research and Quality (AHRQ), part of the U.S. Department of Health and Human Services, publishes software and methodologies for assessing discharges for ACSC. The AHRQ software was applied to analyze the prevalence of discharges for ACSC in geographic areas served by Inova Fairfax.

The ACSC analysis provides a single indicator of potential health problems - allowing comparisons to be made reliably across geographic areas and hospital facilities. This analysis also allows demonstrating a possible "return on investment" from interventions that reduce admissions (for example, for uninsured or Medicaid patients) through better access to ambulatory care resources.

[19] See: http://www.ahrq.gov/data/hcup/factbk5 for more information on this methodology.

1. County/City-Level Analysis

Disproportionately large numbers of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory (primary) care services. **Exhibit 47** indicates for the Inova Fairfax community how many hospital discharges were found to be for ACSC by payer and by area.

Exhibit 47: Inova Fairfax Community-Wide Discharges for ACSC by Payer, 2010

Jurisdiction	Medicaid	Medicare	Other	Private	Self-pay	Unknown /Missing	Total
Fairfax County	6.1%	16.9%	3.5%	5.8%	11.4%	11.8%	9.8%
Falls Church City	8.2%	18.3%	0.0%	6.0%	10.8%	0.0%	11.3%
Loudoun County	8.7%	18.9%	4.5%	5.5%	15.3%	11.1%	9.7%
Manassas City	7.3%	18.8%	3.5%	7.1%	12.3%	9.2%	10.7%
Prince William County	8.6%	20.9%	5.3%	6.9%	14.2%	12.5%	11.3%
Total	**7.2%**	**18.0%**	**4.3%**	**6.1%**	**12.7%**	**11.6%**	**10.2%**

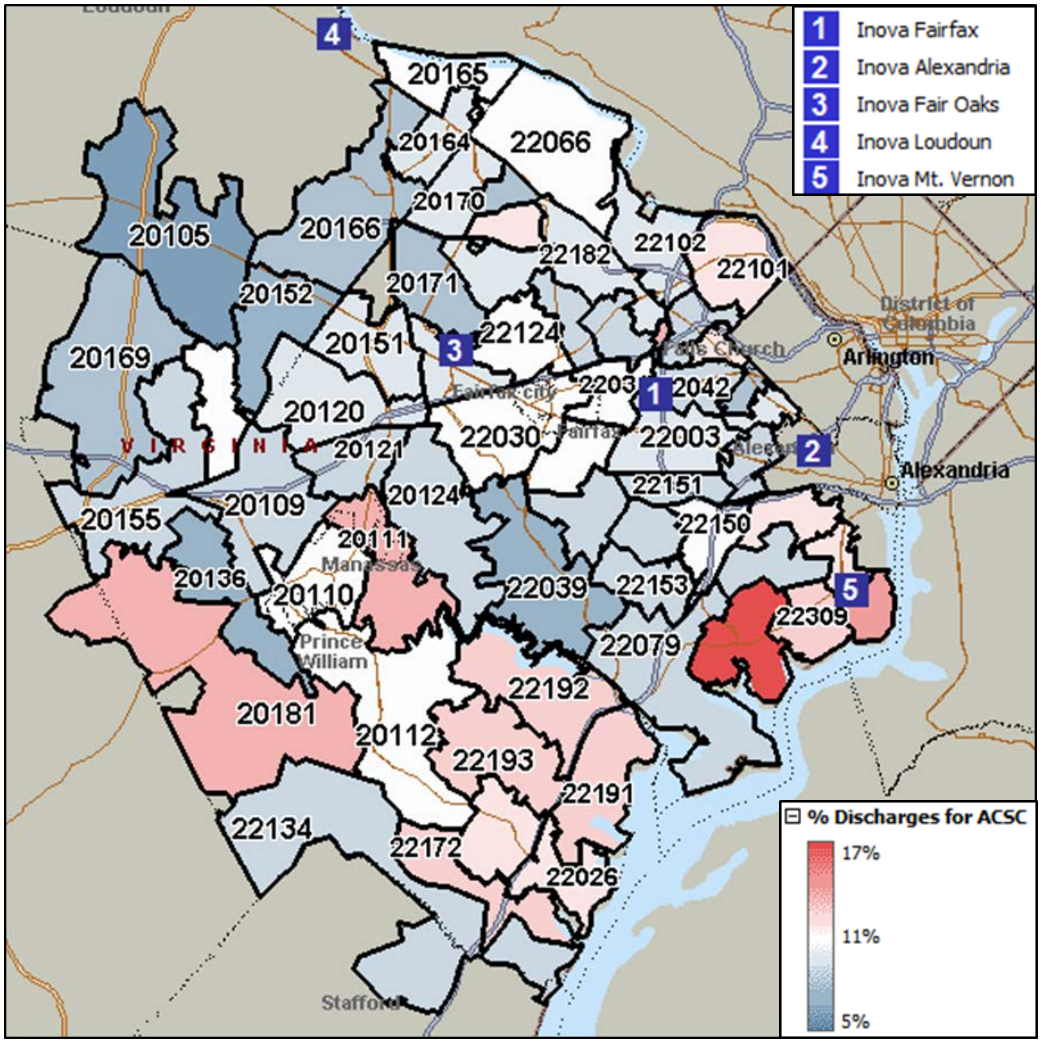
Source: Verité analysis of discharge data from the Health Systems Agency of Northern Virginia using AHRQ software, 2011.

The table indicates that in 2010, 10.2 percent of discharges were for ACSCs. Medicare beneficiaries had the highest proportion of discharges for ACSC, followed by self-pay (uninsured) people.

2. ZIP Code-Level Analysis

Exhibit 48 illustrates the rate of discharges for ACSC by ZIP code. These discharges were most prevalent in Mt. Vernon South/Ft. Belvoir (ZIP codes 22060, and 22308), Vienna (ZIP code 22027), Gainesville/Haymarket/Bull Run (ZIP code 20181), and Manassas East (ZIP code 20111).

Exhibit 48: Community Discharges for ACSC by ZIP Code, 2010



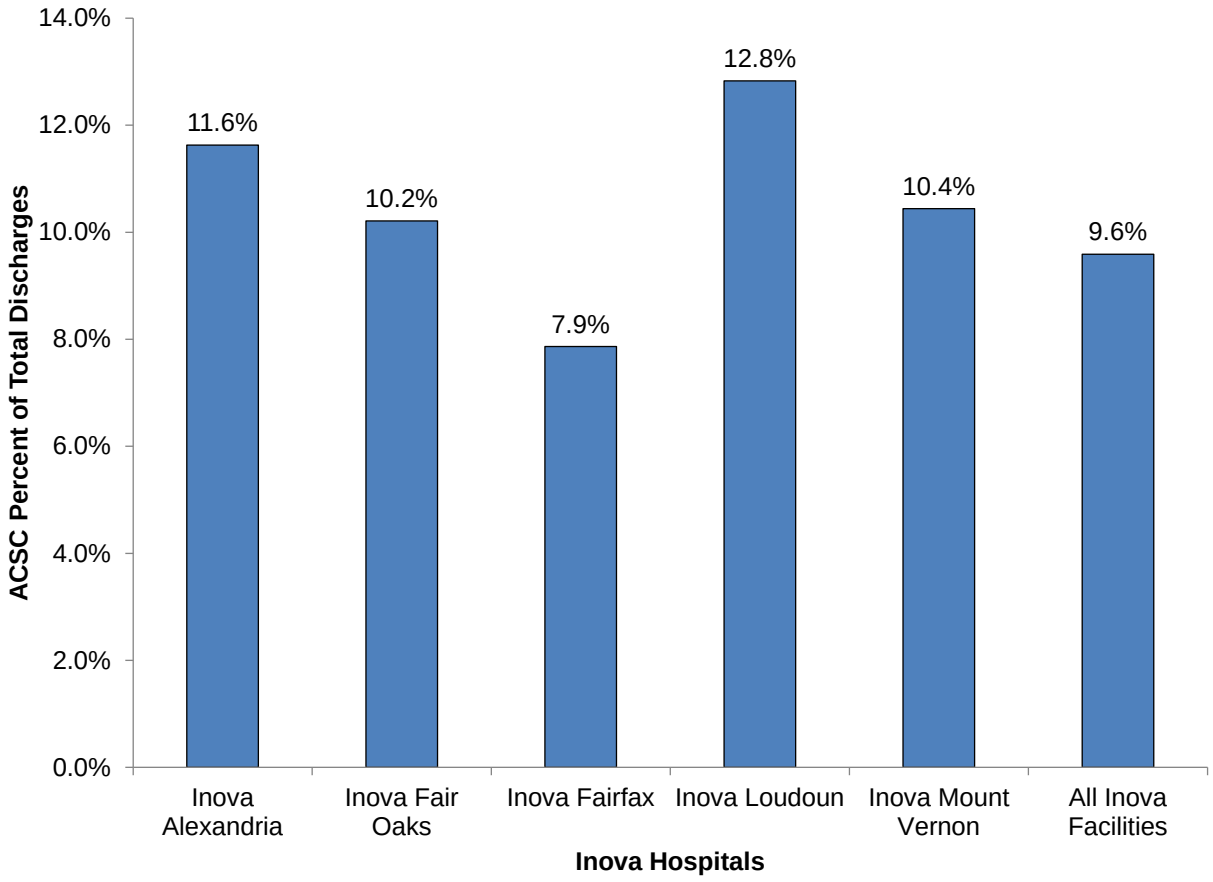
Sources: Microsoft MapPoint and analysis of discharge data from the Health Systems Agency of Northern Virginia using AHRQ software, 2011.

The highest percentage of discharges for ACSC were found in Mt. Vernon South/Ft. Belvoir (ZIP code 22060) – 16.5%

3. Hospital-Level Analysis

Exhibit 49 indicates that 7.9 percent of Inova Fairfax's discharges in 2010 were for ACSC. Across all Inova hospitals, 9.6 percent of discharges (about 8,100 cases) were for ACSC.

Exhibit 49: Inova Fairfax Medical Campus Discharges for ACSC as a Percent of Total Discharges, 2010



Source: Verité analysis of discharge data from the Health Systems Agency of Northern Virginia using AHRQ software, 2011.

Exhibit 50 indicates that Inova Fairfax's discharges for ACSC were most concentrated in three conditions: congestive heart failure, bacterial pneumonia, and urinary tract infection.

Exhibit 50: Discharges for ACSC by Condition and Inova Facility, 2010

Condition	Inova Alexandria	Inova Fair Oaks	Inova Fairfax	Inova Loudoun	Inova Mt. Vernon	Total
Congestive Heart Failure	21.4%	14.3%	22.6%	19.5%	22.9%	**20.7%**
Bacterial Pneumonia	18.1%	18.9%	14.7%	25.0%	17.7%	**17.9%**
Urinary Tract Infection	14.9%	21.0%	14.2%	16.0%	17.3%	**15.9%**
Adult Asthma	13.3%	7.6%	5.4%	5.0%	10.1%	**7.6%**
Chronic Obstructive Pulmonary Disease	5.5%	10.2%	6.8%	8.6%	7.6%	**7.4%**
Diabetes Long-term Complication	7.3%	5.5%	5.6%	6.6%	8.7%	**6.4%**
Pediatric Asthma	0.6%	2.4%	6.9%	2.8%	0.1%	**3.7%**
Dehydration	3.9%	3.2%	2.9%	2.2%	2.7%	**3.0%**
Perforated Appendix	2.3%	3.4%	3.2%	2.7%	2.8%	**3.0%**
Diabetes Short-term Complication	3.7%	1.8%	2.4%	2.5%	4.0%	**2.7%**
Hypertension	3.0%	3.2%	2.2%	3.1%	2.1%	**2.6%**
Pediatric Urinary Tract Infection	0.4%	1.2%	3.7%	1.9%	0.1%	**2.1%**
Accidental Puncture Or Laceration	1.6%	2.8%	1.9%	0.3%	1.2%	**1.7%**
Nosocomial Vascular Catheter Related Infections	1.6%	1.6%	1.2%	1.2%	0.9%	**1.3%**
Pediatric Perforated Appendix	0.1%	0.4%	2.6%	0.6%	0.4%	**1.3%**
Pediatric Diabetes Short-term Complication	0.0%	0.0%	2.2%	0.1%	0.0%	**0.9%**
Uncontrolled Diabetes	1.4%	0.3%	0.4%	0.2%	0.8%	**0.6%**
Angina Without Procedure	0.4%	1.0%	0.3%	0.7%	0.6%	**0.5%**
Pediatric Gastroenteritis	0.2%	0.9%	0.4%	0.6%	0.0%	**0.4%**
Iatrogenic Pneumothorax	0.5%	0.3%	0.5%	0.4%	0.0%	**0.4%**
Foreign Body Left In During Procedure	0.0%	0.0%	0.1%	0.0%	0.0%	**0.0%**
Total	**1,539**	**1,161**	**3,323**	**1,289**	**774**	**8,086**

Source: Verité analysis of discharge data from the Health Systems Agency of Northern Virginia using AHRQ software, 2011.

In 2010, 48.5 percent of Inova Fairfax's discharges for ACSC were for persons 65 years of age and older (**Exhibit 51**).

Exhibit 51: Discharges for ACSC by Age Group and Inova Facility, 2010

Age	Inova Alexandria	Inova Fair Oaks	Inova Fairfax	Inova Loudoun	Inova Mt. Vernon	Total
0 to 17	1.2%	4.9%	15.6%	6.0%	0.6%	**8.4%**
18 to 39	12.8%	12.4%	9.8%	9.1%	9.2%	**10.6%**
40 to 64	34.1%	29.7%	26.1%	31.9%	29.5%	**29.4%**
65+	51.9%	53.0%	48.5%	53.1%	60.7%	**51.7%**
Total	**1,539**	**1,161**	**3,323**	**1,289**	**774**	**8,086**

Source: Verité analysis of discharge data from the Health Systems Agency of Northern Virginia using AHRQ software, 2011.

At Inova Fairfax, the most prevalent ambulatory care sensitive conditions for persons 65 years of age and older were for: congestive heart failure, chronic obstructive pulmonary disease, urinary tract infection, and bacterial pneumonia (**Exhibit 52**).

Exhibit 52: Distribution of Inova Fairfax Discharges for ACSC by Age Group and Condition, 2010

Condition	0 to 17	18 to 39	40 to 64	65+	Total Cases
Congestive Heart Failure		4.0%	24.9%	71.1%	**751**
Bacterial Pneumonia		10.1%	29.2%	60.8%	**487**
Urinary Tract Infection		14.4%	19.7%	65.8%	**471**
Pediatric Asthma	100.0%				**228**
Chronic Obstructive Pulmonary Disease		8.4%	21.6%	70.0%	**227**
Diabetes Long-term Complication		4.3%	48.4%	47.3%	**186**
Adult Asthma		15.1%	45.3%	39.7%	**179**
Pediatric Urinary Tract Infection	100.0%				**122**
Perforated Appendix		38.7%	46.2%	15.1%	**106**
Dehydration		17.5%	30.9%	51.5%	**97**
Pediatric Perforated Appendix	100.0%				**85**
Diabetes Short-term Complication		53.1%	38.3%	8.6%	**81**
Hypertension		8.3%	54.2%	37.5%	**72**
Pediatric Diabetes Short-term Complication	100.0%				**72**
Accidental Puncture Or Laceration		17.2%	50.0%	32.8%	**64**
Nosocomial Vascular Catheter Related Infections		7.5%	67.5%	25.0%	**40**
Iatrogenic Pneumothorax		5.9%	29.4%	64.7%	**17**
Pediatric Gastroenteritis	100.0%				**13**
Uncontrolled Diabetes		8.3%	41.7%	50.0%	**12**
Angina Without Procedure		9.1%	54.5%	36.4%	**11**
Foreign Body Left In During Procedure		50.0%	50.0%		**2**
Total	**15.6%**	**9.8%**	**26.1%**	**48.5%**	**3,323**

Source: Verité analysis of discharge data from the Health Systems Agency of Northern Virginia using AHRQ software, 2011.

Inova Fairfax's top discharges for ACSC were for congestive heart failure, urinary tract infection, and bacterial pneumonia

…

49% of Inova Fairfax's discharges for ACSC were for persons 65 years of age and older

Of Inova Fairfax's emergency department visits in fiscal year 2010, 7.8 percent also could be classified as being for ACSC. Across all Inova hospitals, 9.1 percent of emergency department visits could be classified as being for ACSC in 2010. **Exhibit 53** indicates that Inova Fairfax's emergency department visits for ACSC were more concentrated in three conditions: urinary tract infection, bacterial pneumonia, and adult asthma.

Exhibit 53: Emergency Department Visits for ACSC by Condition and Inova Facility, 2010

Condition	Inova Alexandria	Inova Fair Oaks	Inova Fairfax	Inova Loudoun	Inova Mt. Vernon	Total
Urinary Tract Infection	25.7%	26.5%	30.4%	22.5%	31.5%	**28.1%**
Chronic Obstructive Pulmonary Disease	20.2%	17.9%	9.5%	16.1%	19.7%	**18.4%**
Adult Asthma	15.8%	13.7%	13.8%	16.7%	13.7%	**14.5%**
Bacterial Pneumonia	12.7%	15.0%	16.5%	16.8%	10.4%	**14.2%**
Hypertension	9.0%	8.2%	7.7%	7.7%	9.0%	**7.7%**
Congestive Heart Failure	5.2%	5.9%	8.6%	4.7%	6.1%	**5.4%**
Dehydration	4.8%	6.3%	4.8%	8.1%	2.4%	**5.0%**
Diabetes Long-term Complications	3.8%	2.8%	4.2%	3.4%	3.7%	**3.1%**
Diabetes Short-term Complications	1.6%	0.8%	1.6%	1.2%	1.6%	**1.2%**
Lower-extremity Amputation among Diabetics	0.3%	1.5%	0.5%	1.4%	1.0%	**1.0%**
Perforated Appendix	0.8%	0.7%	2.0%	1.0%	0.5%	**1.0%**
Angina without Procedure	0.2%	0.6%	0.4%	0.4%	0.3%	**0.4%**
Total	**5,965**	**4,592**	**8,016**	**6,118**	**3,276**	**34,200**

Source: Verité analysis of Emergency Department Data, 2011.

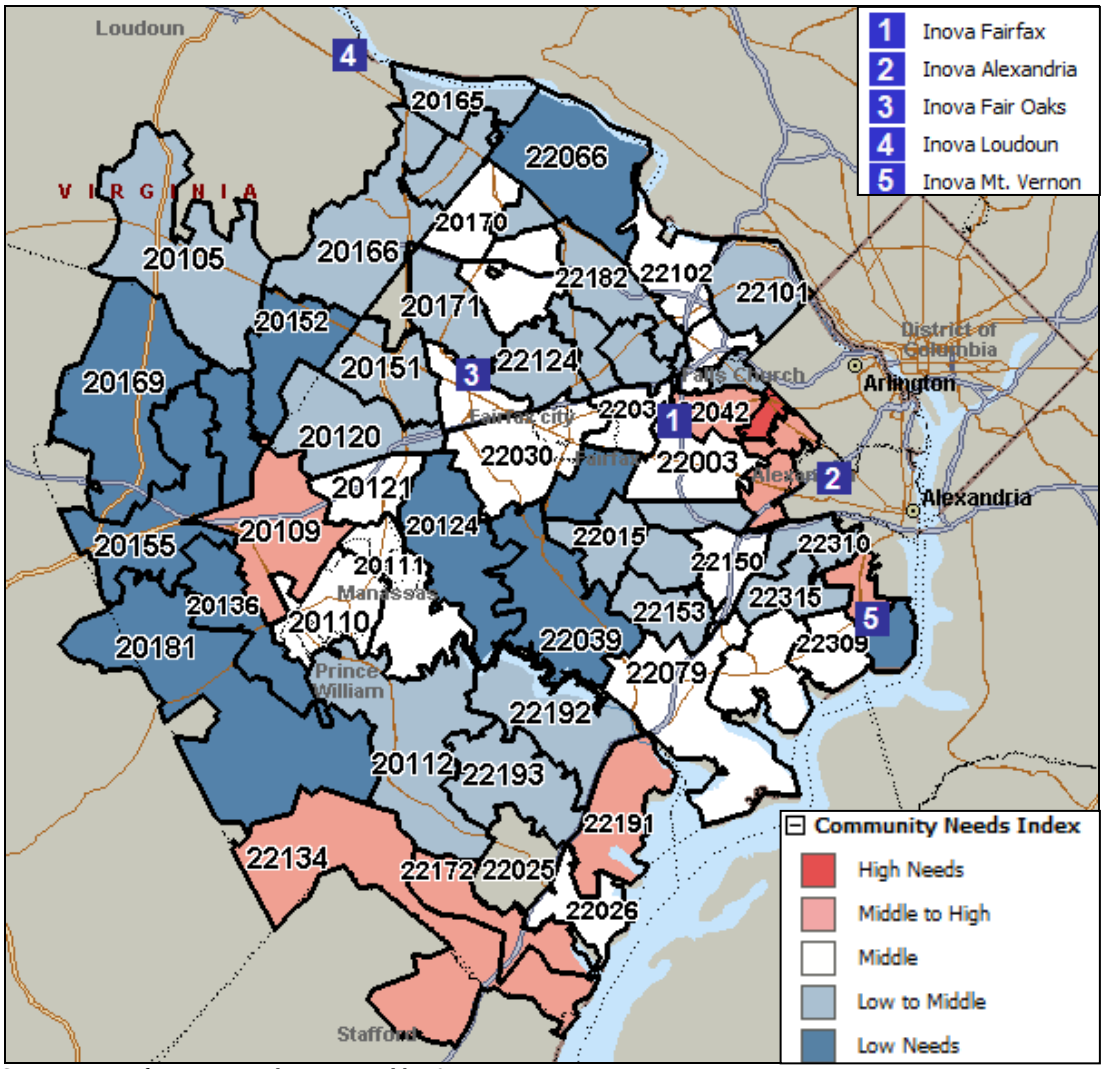
Dignity Health Community Needs Index

Dignity Health, a hospital system based in California, developed the *Community Needs Index*, a standardized index that measures barriers to healthcare access by county and ZIP code. The index is based on five social and economic indicators:

- The percentage of elderly, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without high school diplomas;
- The percentage of uninsured and unemployed residents, and;
- The percentage of the population renting houses.

The *Community Needs Index* represents a score based on these indicators, assigned to each ZIP code. Scores range from "Lowest Need" (1.0-1.7), to "Highest Need" (4.2-5.0). **Exhibit 54** presents the *Community Needs Index* (CNI) score of each ZIP code in the Inova Fairfax community. East Fairfax 29/50 Corridor (ZIP code 22044 which is proximate to 22042) exhibits the highest need with a score of 4.4.

Exhibit 54: Community Needs Index Score by ZIP Code*



Source: Microsoft MapPoint and Dignity Health, 2012.
*Not all ZIP codes are assigned a CNI score; these ZIP codes are gray on the map.

Areas of higher access needs are concentrated in Fairfax and Prince William counties

…

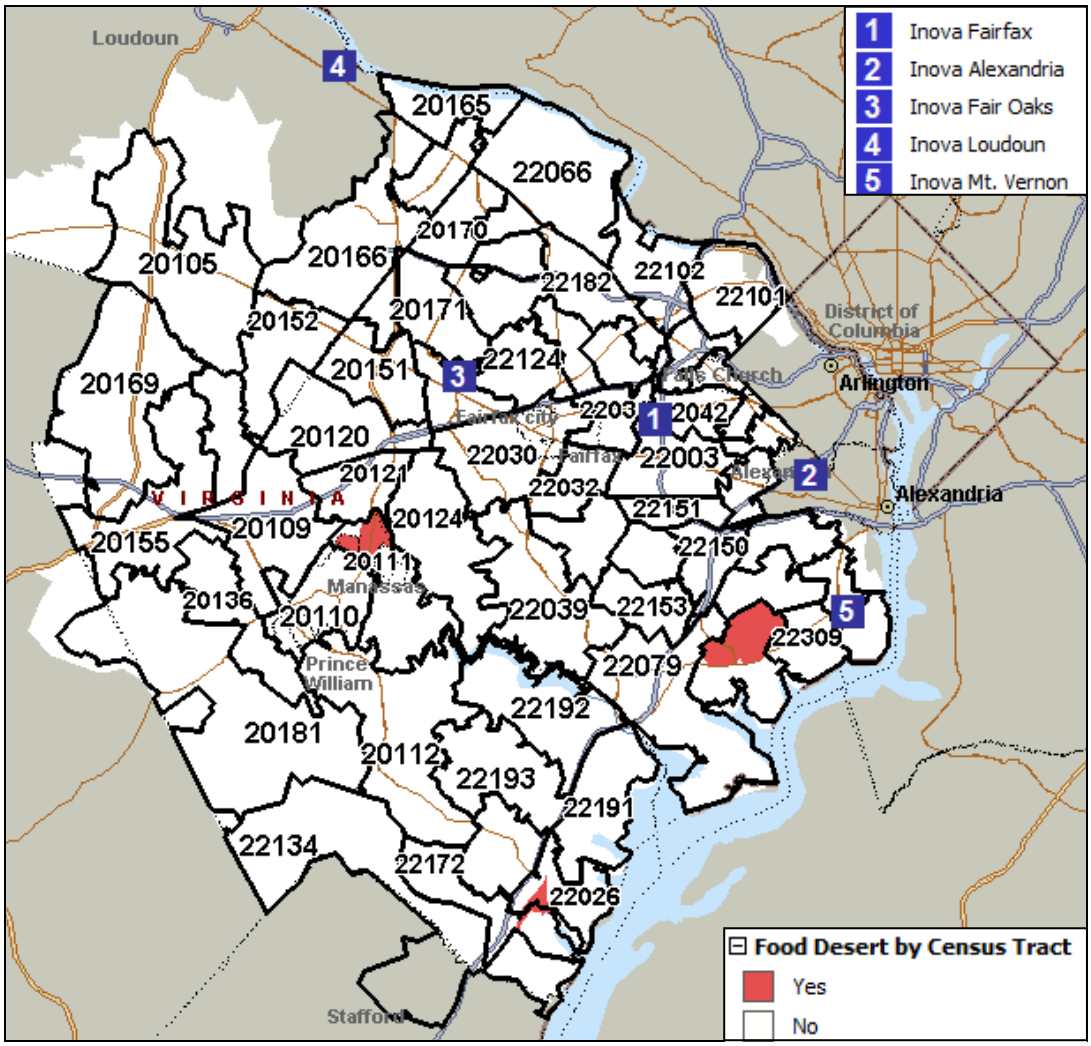
East Fairfax 29/50 Corridor (ZIP code 22044) had the highest CNI score of 4.4

Food Deserts

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live "more than 1 mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas."[20] Several government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these "food deserts." **Exhibit 55** indicates the location of identified food deserts in the Inova Fairfax community.

Five census tracts in the community were determined to be food deserts. These are located in Mt. Vernon South/Ft. Belvoir (ZIP code 22060), Manassas East (ZIP code 20111), and Dale City/Dumfries/Quantico (ZIP codes 22026 and 22172).

Exhibit 55: Location of Food Deserts by Census Tract, 2009



Source: Microsoft MapPoint and U.S. Department of Agriculture, 2010.

[20] U.S. Department of Agriculture. Retrieved 2011, from http://www.ers.usda.gov/Data/FoodDesert/

Chronic Disease

According to the CDC, chronic diseases are "noncommunicable illnesses that are prolonged in duration, do not resolve spontaneously, and are rarely cured completely." The CDC also indicates that chronic diseases are "the most common and costly of all health problems" and are "also the most preventable." Certain behaviors, especially "tobacco use, insufficient physical activity, poor eating habits, and excessive alcohol use" contribute to the occurrences of chronic diseases.[21]

Chronic diseases are both common in prevalence and costly to treat. The CDC indicates that nearly fifty percent of adult Americans "live with at least one chronic illness" and that these illnesses are responsible for 75 percent of health care costs.

Because of the health impacts of chronic disease, PPACA includes provisions that aim to prevent, manage, or reduce chronic disease. IRS Notice 2011-52 (anticipatory regulations regarding the CHNA process) further emphasizes its importance by encouraging hospital facilities to interview persons who can serve as a leader or representative of those with chronic diseases.

Assessment findings regarding chronic disease include the following.

- Chronic Disease Incidence Rates
    - The incidence rates of breast and ovarian cancers and melanomas in Fairfax County and cervical and ovarian cancers in Prince William County were higher than Virginia rates according to the Virginia Department of Health.
    - The following chronic diseases compared unfavorably to Virginia averages according to the Behavioral Risk Factor Surveillance System:
        - Asthma in Fairfax City and Prince William County;
        - Diabetes in Manassas City; and
        - Coronary heart disease or angina in Fairfax County.
- Chronic Disease Mortality Rates
    - The following mortality rates compared unfavorably to national and peer county averages according to the Community Health Status Indicators Project:
        - Breast cancer in Fairfax, Falls Church, and Manassas cities and Loudoun County;
        - Colon cancer in Fairfax and Manassas Park cities;
        - Lung cancer in Fairfax and Manassas Park cities; and
        - Strokes in Manassas and Manassas Park cities.

[21] See http://www.cdc.gov/chronicdisease/resources/publications/AAG/chronic.htm.

- The following mortality rates compared unfavorably to Virginia averages according to the Virginia Department of Health:
    - Cancer, cerebrovascular diseases, and primary hypertension and renal diseases in Fairfax City;
    - Chronic lower respiratory disease in Manassas City; and
    - Diabetes in Fairfax and Manassas Park cities.
- Health disparities exist among racial cohorts for various cancers, cardiovascular diseases, cerebrovascular diseases, and diabetes mellitus mortality rates according to the Virginia Department of Health.
- Racial cohorts compared unfavorably to Virginia averages for the following mortality rates according to the Virginia Department of Health:
    - Various cancers in the non-White population of Fairfax, Loudoun, and Prince William counties;
    - Chronic liver disease and cirrhosis in the Black population in Loudoun County;
    - Prostate cancer in the White population of Fairfax County; and
    - The Other[22] population: hypertensive heart and renal diseases and "all other diseases of the heart" in Fairfax County, ischemic heart diseases in Prince William County, chronic liver disease and cirrhosis in Loudoun and Prince William counties, diabetes mellitus in Fairfax and Loudoun counties, and cerebrovascular diseases in Fairfax County.

- Discharges for ACSC Associated with Chronic Disease
    - Congestive heart failure, chronic obstructive pulmonary disease, adult and pediatric asthma, and diabetes long-term complications all accounted for at least five percent of Inova Fairfax's discharges for ACSC.

Analysis of diagnosis codes in inpatient discharge data from the Inova Health System indicate that 44 percent of Inova Fairfax's discharges were for conditions identified by CMS as associated with chronic disease. Discharges for chronic disease were concentrated in chronic kidney disease, heart failure, anemia, stroke, diabetes, myocardial infarction, depression, hypertension, asthma, ischemic heart disease, arterial fibrillation, and rheumatoid arthritis/osteoarthritis (**Exhibit 56)**.

[22] The "Other" population includes residents who do not identify as White or Black.

Exhibit 56: Percent of Chronic Condition Discharges from Inova Fairfax, 2010

Chronic Condition	Percent of Discharges
Chronic Kidney Disease	14.7%
Heart Failure	9.3%
Anemia	7.8%
Stroke	7.5%
Diabetes	7.4%
Acute Myocardial Infarction	6.8%
Depression	5.5%
Hypertension	5.1%
Asthma	4.9%
Ischemic Heart Disease	4.8%
Atrial Fibrillation	4.7%
Rheumatoid Arthritis / Osteoarthritis	3.7%
Hip/Pelvic Fracture	3.0%
Chronic Obstructive Pulmonary Disease And Bronchiectasis	2.9%
Hyperlipidemia	2.7%
Acquired Hypothyroidism	2.5%
Colorectal Cancer	1.6%
Alzheimer's Disease And Related Disorders Or Senile Dementia	1.5%
Lung Cancer	1.4%
Prostate Cancer	0.8%
Female / Male Breast Cancer	0.7%
Endometrial Cancer	0.3%
Benign Prostatic Hyperplasia	0.2%
Glaucoma	0.1%
Osteoporosis	0.0%
Cataract	0.0%
Total Discharges Associated with Chronic Conditions	**18,850**

Source: Verité analysis of discharge data from the Inova Health System.

Medically Underserved Areas and Populations

HRSA has calculated an Index of Medical Underservice (IMU) score for communities across the U.S. The IMU score calculation includes the ratio of primary medical care physicians per 1,000 persons, the infant mortality rate, the percentage of the population with incomes below the poverty level, and the percentage of the population greater than age 64. IMU scores range from zero to 100 where 100 represents the least underserved and zero represents the most underserved.[23]

Any area or population receiving an IMU score of 62.0 or less qualifies for Medically Underserved Area (MUA) or Medically Underserved Population (MUP) designation. Federally Qualified Health Centers (FQHCs) may be established to serve MUAs and MUPs. Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. When a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP

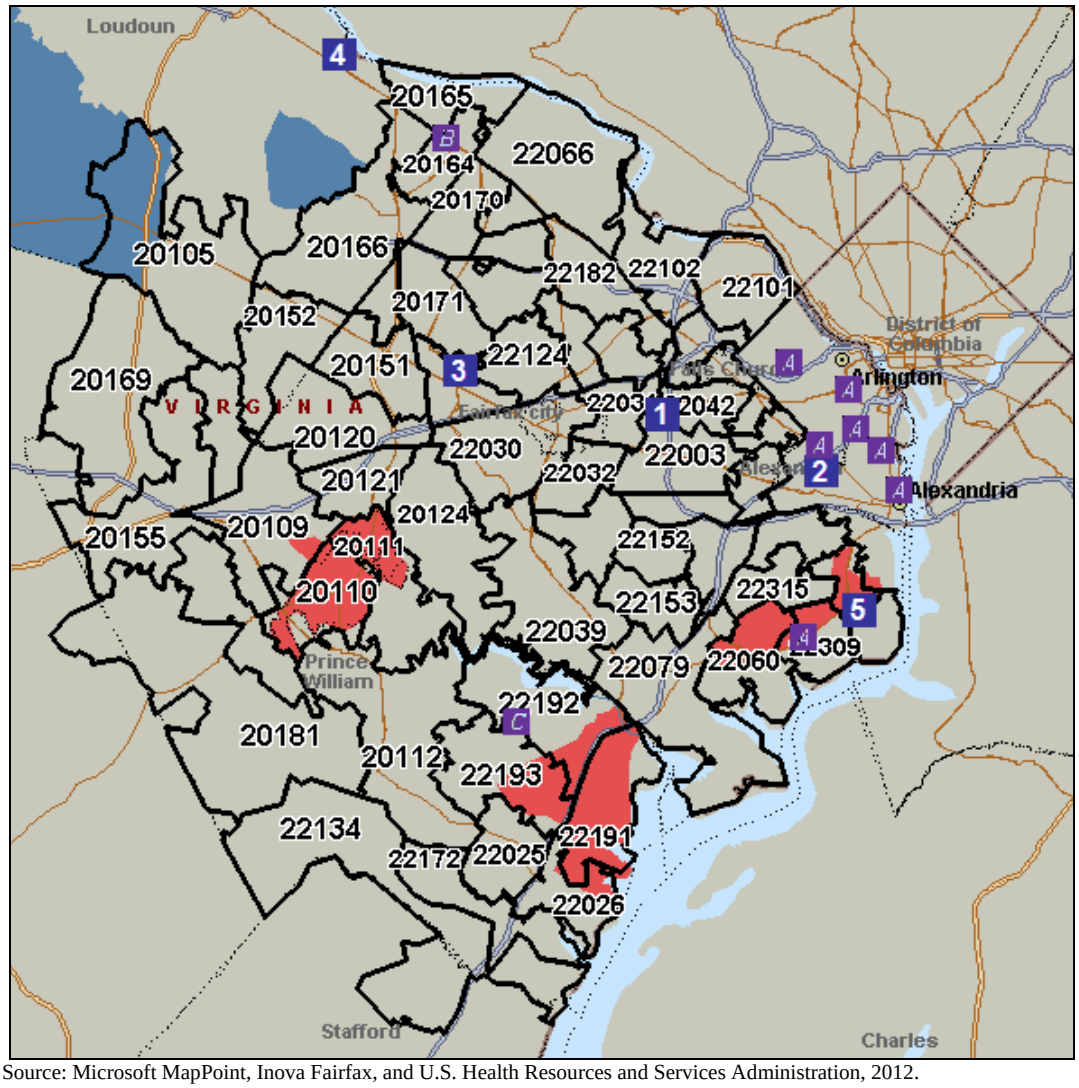
[23] U.S. Health Resources and Services Administration. (n.d.) *Guidelines for Medically Underserved Area and Population Designation*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/muaps/index.html.

designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the State where the requested population resides."[24]

Exhibit 57 shows areas designated by HRSA as medically underserved. Loudoun County, Manassas and Manassas Park Cities, and Prince William County contain MUAs and MUPs. Fairfax County recently submitted an application for MUP status that was approved by HRSA.

[24] *Ibid.*

Exhibit 57: Location of Federally Designated Areas in the Inova Fairfax Community, 2012



Source: Microsoft MapPoint, Inova Fairfax, and U.S. Health Resources and Services Administration, 2012.

The Inova Fairfax community contains MUAs, MUPs, and HPSAs

Health Professional Shortage Areas

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary care, dental care, or mental health care professionals is found to be present.

In addition to areas and populations that can be designated as HPSAs, a facility can receive federal HPSA designation and a resultant, additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health professionals and service capacity.

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[25]

In the Inova Fairfax community, the Greater Prince William Community Health Center is designated as primary care, mental, and dental health HPSA. The Loudoun Community Health Center also is designated as primary care, mental, and dental health HPSA and has a location in Sterling, VA (ZIP code 20146) (**Exhibit 57**). Alexandria Neighborhood Health Services, Inc. (ANHSI), a primary care, mental, and dental health HPSA, plans to open a location in the Inova Fairfax community.

Description of Other Facilities and Resources within the Community

The Inova Fairfax community contains a variety of resources that are available to meet the health needs identified in this CHNA. These resources include clinics, hospitals, health professionals, and other agencies and organizations.

In the Inova Fairfax community, three Federally Qualified Health Centers are designated as primary medical care, mental health, and dental HPSAs. The Greater Prince William Community Health Center, located in Woodbridge (ZIP code 22192), provides family medicine services including primary, prenatal, dental, and behavioral health care. The health center is open five days per week with evening hours on Wednesday.[26]

The Loudoun Community Health Center, with locations in Leesburg (ZIP code 20176) and Sterling (ZIP code 20164), provides pediatric and adult medicine, ob/gyn, mental health, prenatal care, and lab services to the uninsured and underinsured. Dental care and specialty care are provided through referral agreements and community partners. The health center is open six days per week.[27]

ANHSI currently has eight locations and provides family medicine services including primary, prenatal, dental, and behavioral health care. The health center is open five days per week with

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[25] U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html

[26] http://gpwhealthcenter.org/

[27] http://loudounchc.org/

evening hours on Tuesday, Wednesday, and Thursday.[28] ANHSI recently acquired a physician practice located in Fairfax County and will soon provide services in the community served by Inova Fairfax Medical Campus.

Every jurisdiction, except Manassas Park City, contains at least one hospital facility (**Exhibit 58**).

Exhibit 58: Hospital Facilities in the Inova Fairfax Community, 2011

Location	Facility Name	ZIP Code
Fairfax City	Fairfax Surgical Center	22030
Fairfax County	Franconia-Springfield Surgery Center	22310
	Inova Fairfax Medical Campus	22042
	Inova Mt. Vernon Hospital	22306
	Northern Virginia Eye Surgery Center	22031
	Northern Virginia Surgery Center	22033
	Potomac Ambulatory Surgery Center, LLC	22031
	Reston Hospital Center	20190
	Reston Surgery Center	20190
	Skin Cancer Outpatient Surgical Hospital	22182
Falls Church City	Kaiser Permanente Falls Church Medical Center	22046
Loudoun County	Healthsouth Rehabilitation Hospital Of Northern Virginia	20105
	Inova Loudoun Ambulatory Surgery Center	20176
	Inova Loudoun Hospital	20176
	Inova Surgery Center - Countryside	20165
Manassas City	Prince William Ambulatory Surgery Center	20110
	Prince William Hospital	20110
Manassas Park City	None	-
Prince William County	Potomac Hospital	22191
	Sentara Potomac Hospital	22191

Source: The Virginia Department of Health Office of Licensure and Certification Directory of Inpatient Hospitals and Outpatient Surgical Centers in Virginia, and the CMS Impact File, 2012.

Ambulatory surgery centers appear in **Exhibit 58** because Virginia licenses these sites as "outpatient hospital" facilities.

Federally Qualified Health Centers (FQHCs) were created by Congress to promote access to ambulatory care in areas designated as "medically underserved." These clinics receive cost-based reimbursement for Medicare and many also receive grant funding under Section 330 of the Public Health Service Act. FQHCs also receive a prospective payment rate for Medicaid services based on reasonable costs.

There are three FQHCs located in the Inova Fairfax community.

1. The Loudoun County Community Health Center has locations in Leesburg (ZIP code 20176) and Sterling (ZIP code 20164). The main campus in Leesburg is relocating to a new facility in October 2012, and they recently received a grant to open a new site in Herndon, in Fairfax County.

[28] http://www.anhsi.org/index.html

2. The Greater Prince William Community Health Center, located in Woodbridge (ZIP code 22192), provides family medicine services including primary, prenatal, dental, and behavioral health care. The health center is open five days per week with extended hours on Wednesday.[29]
3. ANHSI currently is located in Alexandria (ZIP code 22305) but recently acquired a physician practice located in Fairfax County; it will soon provide services in the community served by Inova Fairfax Medical Campus. The health center is open five days per week with evening hours on Tuesday, Wednesday, and Thursday.[30]

Exhibit 59 presents the number of primary care physicians, mental health providers, and dentists per 100,000 population. The number of professionals available on a per-capita basis is well below Virginia averages in several areas served by Inova Fairfax Medical Campus.

Exhibit 59: Health Professionals per 100,000 Population by Jurisdiction

Jurisdiction	Primary Care Physicians*		Mental Health Providers*		Dentists*	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Fairfax County	1,621	159.0	663	65.0	912	88.7
Fairfax City	8	33.2	31	128.8	49	226.0
Falls Church City	46	405.0	30	264.1	29	264.9
Loudoun County	296	102.0	101	34.8	171	61.1
Manassas City	74	213.5	12	34.6	30	85.8
Manassas Park City	N/A	N/A	2	17.5	2	15.8
Prince William County	242	66.1	72	19.7	118	32.1
Virginia	**9,676**	**124.1**	**3,788**	**48.6**	**2,896****	**37.1**

Source: HRSA's Area Resource File via *County Health Rankings*, 2012.
*Primary care physicians data is from 2009; data regarding mental health providers and dentists is from 2007.
**Number of dentists in Virginia calculated by Verité.

As of 2012, a range of other agencies and organizations are available in each jurisdiction to assist in meeting health needs, including county health departments and human services departments.

Some of these include:

- Three Federally Qualified Health Centers, Alexandria Neighborhood Health Services, Inc., Loudoun Community Health Center, and the Greater Prince William Community Health Center;
- The Fairfax County, Loudoun County, and Prince William County health departments and their associated clinics;
- Free clinics and other clinics that serve underserved populations, including the Jeannie Schmidt Free Clinic (which merged with Loudoun Community Health Center in Fall 2012), Loudoun Free Clinic, Prince William Area Free Clinic, Mission Life Center Hope Clinic, Lions Eye Clinic, and the Northern Virginia Dental Clinic;

[29] http://gpwhealthcenter.org/
[30] http://www.anhsi.org/index.html

- InovaCares initiatives including Inova CaresClinic for Children, Inova CaresClinic for Women, and the Inova Juniper Program (which serves clients with HIV/AIDs);
- Low cost prescription services such as the Fairfax County Prescription Discount Card and NovaScripts Central;
- The Fairfax-Falls Church, Loudoun County, and Prince William County Community Services Boards (which serve clients who are mentally ill);
- Two Fairfax County Community Health Center Network (CHCN) locations (which serve low-income, uninsured patients); and
- The Reston Hospital Center and Prince William Health Systems.

The Inova Juniper Program soon will be opening a clinic in Leesburg. This site will provide transitional care for patients without a primary care physician who are discharged from the hospital with diabetes, congestive heart failure, chronic obstructive pulmonary disease, and/or asthma. This clinic is a level 3 recognized patient centered medical home (PCMH).

Lists of available resources also have been compiled by community foundations, clinics, and health departments and can be found at the following websites:

- Alexandria City Department of Community and Human Services: http://alexandriava.gov/DCHS
- Alexandria City Health Department Healthy Links: http://alexandriava.gov/health/info/default.aspx?id=11464
- Alexandria City Health Department Medical Services: http://alexandriava.gov/health/info/default.aspx?id=11444
- Fairfax County Health Department Safety Net Contact List: http://www.fairfaxcounty.gov/hd/pcs/pcspdf/chcn-safety-net-contact-list.pdf
- Fairfax County Health Department A-Z: http://www.fairfaxcounty.gov/hd/a-z-hd.htm
- Fairfax County Human Services Resource Guide: http://www.fairfaxcounty.gov/hsrg/
- Fairfax County Public Schools Low Cost Health Care Resources in Northern Virginia: http://www.fcps.edu/HyblaValleyES/resources/Clinics.pdf
- Inova in the Community: http://www.inova.org/inova-in-the-community/index.jsp
- Loudoun County Health Resource Directory: http://www.loudoun.gov/BusinessDirectoryII.aspx?lngBusinessCategoryID=24
- National Capital Region 2-1-1 Combined Database: http://www.211metrodc.org/
- Northern Virginia Health Foundation Wellness Directory: http://novahealthfdn.org/health-wellness-directory

- Northern Virginia Health Services Coalition Find A Clinic: http://www.novaclinics.org/find-a-clinic
- Northern Virginia Regional Commission Quick Guide: http://www.novaregion.org/index.aspx?nid=281
- Prince William County Health Department: http://www.pwcgov.org/government/dept/health/Pages/default.aspx
- Virginia Association of Free Clinics: http://vafreeclinics.org/

Findings of Other Recent Community Health Needs Assessments

Verité also considered the findings of other needs assessments published since 2005. Thirteen such assessments have been conducted in the Inova Fairfax area and are publicly available. Summary findings from these assessments are provided below, with the most recent presented first.

1. The Commonwealth Institute for Fiscal Analysis

In 2012, the Commonwealth Institute for Fiscal Analysis published a report entitled *Under Pressure: The State of Working Northern Virginia.*[31] That report provided an overview of data regarding the economic well-being of Northern Virginia, with a particular focus on the challenges faced by low and moderate-income residents.

The following key findings are relevant to Northern Virginians' ability to access care:

- Median income levels declined disproportionately in Northern Virginia from 2007 to 2010; lower-income households saw a decline more than three times that of the region's higher-income households.
- The cost of living in the region is high, placing further strain on lower-income residents. In 2010, a family of four living in Northern Virginia (assuming one pre-school aged child and one school-aged child) required an income ranging from approximately $51,000 in Fauquier County to nearly $67,000 in Loudoun County to meet a minimum standard of living.
- From 2007 to 2012, enrollment in public assistance services increased. Most notably, the number of people enrolled in the Supplemental Nutrition Assistance Program (SNAP) increased 131 percent in the region compared to a 77 percent increase in Virginia as a whole.

[31] The Commonwealth Institute (May 2012) *Under Pressure: The State of Working Northern Virginia*. Retrieved 2012, from http://www.thecommonwealthinstitute.org/wp-content/uploads/2012/05/120508_under_pressure.pdf

2. The George Mason University College of Health and Human Services

In 2012, George Mason University published a report entitled *Recommendations to the Fairfax County Health Care Reform Implementation Task Force.*[32] This report summarized Fairfax County's health status and healthcare resources as context for the consideration of options for responding to the recent federal health reform law.

Health status and healthcare access findings in the report are as follows:

- Although Fairfax County as a whole is comparatively wealthy and asset-rich, inequalities exist in health status and healthcare access, particularly for low-income populations and racial and ethnic minorities in the Richmond Highway Corridor, Bailey's Crossroads-Culmore area, and the Reston-Herndon area.
    - The number of families living at or below 200 percent of poverty increased 33 percent from 2000-2009.
    - The high cost of living in the county particularly has affected those living on low or fixed incomes.
    - Mortality rates, teen pregnancy, low birth weights and infant mortality rates, cancer, high blood pressure, and communicable disease rates were highest for Black residents.
- Thirteen percent of Fairfax County residents lacked health insurance in 2010. Eight percent of children five years of age and younger lived in poverty.
    - Hispanic residents are most likely to be uninsured. This group accounts for 30 percent of the total uninsured population in the county.
- An estimated 23 percent of the uninsured population was served by Fairfax County's safety net providers, specifically the Community Service Boards (CSBs) and Community Health Care Network (CHCN) clinics. Roughly 40 percent of the uninsured population seeks care each year.
- Approximately half of the county's uninsured population may gain insurance coverage as a result of healthcare reform; at least half of those individuals will obtain private coverage rather than Medicaid. The county's safety net services can be instrumental in maintaining access to care during this transition.
- The area is expecting a shortage of primary care physicians in coming years. Thirty-nine percent of the county's primary care physicians were 60 years of age or older in 2010 and are anticipated to retire within the next few years. Few new physicians are electing primary care.

[32]George Mason University (March 2012) *Recommendations to the Fairfax County Health Care Reform Implementation Task Force*. Retrieved May 2012, from http://chpre.org/wp-content/uploads/2012/04/Final-GMU-Fairfax-County-FINAL-Report-4-3-12.pdf

- The area lacked sufficient physicians and specialists to treat low-income, Medicare, and Medicaid patients. Dental health professionals, as well as physicians who serve children, the chronically ill, the elderly, and those with disabilities, will be in greatest demand in upcoming years. The area especially lacked mental and behavioral health providers, regardless of insurance status. These problems will be compounded when the health reform law takes effect.

- Fairfax County care providers need to collaborate to improve access to services. The development and implementation of information technology is recommended to support integrated service delivery, administrative functions, and coordination among providers.
- The community would benefit from an outreach campaign to educate residents about new coverage options and services.

3. The Loudoun County Board of Supervisors

In March 2012, the Loudoun County Board of Supervisors approved an action item entitled *Loudoun Lyme Disease Prevention and Awareness.*[33] Data presented in this action item include:

- Eighteen percent of Lyme disease cases reported in Virginia in 2011 were from Loudoun County.
- Lyme disease is underreported due to frequent misdiagnosis and administrative burden.
- Many other infections can be transmitted alongside Lyme disease by ticks.

4. Fairfax County Department of Neighborhood and Community Services and Fairfax County Public Schools

The *School Year 2011-2012 Fairfax County Youth Survey*[34] was developed collaboratively by the Fairfax County Public Schools and Department of Neighborhood & Community Services. This survey, administered on a confidential basis to students in grades six, eight, ten, and twelve, offers insight into youth behaviors and trends in substance abuse, mental health, violence and delinquency, overall health status, and health risk behaviors.

Summary findings from the most recent survey are listed below:

- Alcohol was the most commonly used substance among Fairfax County youth, but the prevalence of students who used alcohol in the last month (22 percent) was lower than the national average. Twelfth graders reported the highest percentage of alcohol use at 37 percent.

[33] Loudoun County Board of Supervisors. (March 2012). *Loudoun Lyme Disease Prevention and Awareness.*

[34] Fairfax County Public Schools and Department of Neighborhood & Community Service. (September 2011) *School Year 2011-2012Fairfax County Youth Survey*. Retrieved 2012, http://www.fairfaxcounty.gov/demogrph/youthpdf.htm

- Approximately four percent of eighth graders reported using inhalants in the past month compared to one percent in twelfth grade. Twenty percent of twelfth graders reported using marijuana. This is more than five times the rate reported by eighth graders.
- Thirty-two percent of students reported experiencing depression in the past year. Females and Hispanics were more likely to experience depression.
- Twenty-six percent of Fairfax County youth reported eating five servings of fruits and vegetables per day, almost twice the national average.
- Thirteen percent of females reported engaging in one hour or more of physical activity for at least seven days per week compared to 28 percent of males. Physical activity levels decrease with students' age.
- Fifty-one percent of students reported being bullied in the past year. Bullying was most prevalent in eighth and tenth grades.
- Two-thirds of youth who report being sexually active also report using a condom. Twenty percent of students report having ever had sex. Black and Hispanic students are more likely to have had sex than other groups, at 30 and 32 percent, respectively.
- Female students had a higher likelihood of considering committing suicide, at 20 percent, compared to males at 12 percent.

5. Northern Virginia Health Foundation

In September of 2011, the Northern Virginia Health Foundation commissioned a report entitled *Oral Health in Northern Virginia.*[35] That report provided a region specific analysis on oral health needs based on a literature review and a survey of residents in the region. The survey covered residents from Arlington, Fairfax, Loudoun, and Prince William counties as well as the cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park.

Findings show that lower-income people in Northern Virginia face barriers to accessing dental care and have comparatively poor oral health:

- In Northern Virginia, more than a third of those in lower-income households (making less than $40,000 per year) rated their oral health as fair or poor. The percentage was much lower for those in households making over $40,000 per year.
- Virginia as a whole scored poorly on its ability to address children's oral health needs, according to a *The State of Children's Dental Health: Making Dental Coverage Matter*, a report by the Pew Center on The States. Approximately 48 percent of children enrolled in Virginia Medicaid's "Smiles for Children" program received no dental services at all in 2009. Benefits for adults enrolled in Medicaid are limited to medically necessary oral surgery.

[35]Northern Virginia Health Foundation (September 2011) *Oral Health in Northern Virginia*. Retrieved 2012, from http://novahealthfdn.org/wp-content/uploads/NVHF-OralHealth-Report-FINAL.pdf

- There are organizations throughout Northern Virginia that provide dental care for low income and uninsured individuals, but waiting lists remained full, and more than 300 patients typically are waiting for care.
- The report identifies barriers to accessing dental care including: low income levels, high costs of care, lack of transportation, a lack of access to dental insurance, and a lack of access to dentists who are able to treat the handicapped or those with special needs.
- Only about 24 percent of lower-income adults with physical health coverage also have dental health coverage. Typically 64 percent of insured, higher-income individuals had dental coverage.
- Lower-income residents were more likely to seek hospital emergency room care for acute dental problems. Almost five times as many lower-income residents had received emergency room care in the last two years compared to higher-income residents.
- Nearly 45 percent of lower-income parents had not been able to afford dental care for their children in the last two years. Only about 62 percent of low-income parents had taken their children to the dentist in the last two years, compared to 79 percent of the higher-income parents.
- Higher percentages of lower-income adults had dentures and report waiting to get a tooth pulled, compared to higher-income adults.
- Only about 35 percent of lower-income women saw the dentist for basic checkups while pregnant, compared to two thirds of higher-income women.
- Almost 23 percent of lower-income women had gum or teeth related problems during pregnancy compared to three percent of higher-income women.

6. Partnership for a Healthier Fairfax MAPP Report

The *Community Health Status Assessment Report,*[36] published by the Partnership for a Healthier Fairfax in September 2011, provided an overview of the health and wellbeing of Fairfax County. Partnership for a Healthier Fairfax utilized the Mobilization for Action through Planning and Partnerships (MAPP) process to identify public health issues. The regions that were included in this study are Fairfax County, the City of Fairfax, the City of Falls Church, and the subregions of Herndon, Clifton, and Vienna.

Key problem area categories included:

1. Income Disparities
    - While Fairfax County was one of the most affluent areas in the US, the number of residents living in poverty increased 33 percent from 2000-2009.

[36]Partnership for a Healthier Fairfax (September 2011) *Community Health Status Assessment Report*. Retrieved 2012, from http://www.fairfaxcounty.gov/hd/mapp/pdf/comm-health-assessment.pdf

- In 2009, six percent of individuals were living in poverty.
- Reston, Herndon, Bailey's Crossroads-Culmore, Central Fairfax, and the Richmond Highway corridor had a high percentage of people living in poverty.

2. Access
    - More than one out of every 10 residents of the county lacked health insurance in 2009, though more residents were likely to have health insurance than the US average.
    - Virginia's eligibility criteria for Medicaid were between 80 percent and 133 percent of FPL, depending on the program; eligibility criteria for SCHIP were less than 185 percent of FPL. Additionally, many primary care physicians were unwilling to accept new Medicaid patients due to reimbursement and other concerns.
    - Fairfax County is anticipating a shortage of primary care physicians, nurses, and specialists due to the number of physicians reaching retirement age. New physicians entering the medical profession are less likely to elect primary care, and those who do choose a primary care practice are not entering at a rate fast enough to replace those who are leaving. Providers willing and able to serve children, the chronically ill, the elderly, and those with disabilities and/or mental disorders will be in greatest demand.
3. Health Behaviors
    - Fifty-four percent of Fairfax County's adult population was physically inactive. The county benchmarks poorly on this indicator compared to other areas of Virginia.
    - Seventy-two percent of residents ate fewer than five servings of fruits and vegetables daily.
    - Fifty-two percent of county residents were overweight or obese.
    - Alcohol was the most commonly abused substance for individuals under the age of 18.
    - Twenty percent of the Fairfax County population suffered from high blood pressure.
4. Housing
    - The cost of living in Fairfax County was high. The county is among the most expensive areas in the nation for housing. The elderly and low-income populations were burdened by housing costs.
5. Mental Health
    - Fairfax Public Schools reported a rate of depression that was higher than the national average. Suicide was one of the leading causes of death among youth and young adults in Fairfax County.
6. Infectious Disease

- Tuberculosis rates were more than two times higher than Virginia and national averages.

7. Environment
    - Air quality was ranked as the poorest in Virginia.
    - Initiatives to improve public transportation lagged behind need.
    - Most marine and freshwater recreational waters in Fairfax County failed to meet water quality regulations and guidelines.
    - Fairfax County saw significant increases in the number of reported cases of Lyme disease since 2000. Fairfax County's rate of 25 cases per 100,000 persons was more than double the Virginia rate.
    - Incidence of animal rabies in Fairfax County consistently was one of the highest out of all Virginia counties between 2000 and 2009.
    - In 2009, 13 times as many Lyme disease cases were reported than were reported in 2000.

7. Prince William Area Coalition for Human Services and Prince William United Way, 2011

In 2011, the Prince William Area Coalition for Human Services and Prince William United Way published the *Greater Prince William County Community Needs Assessment*[37] with the goal of improving the quality of life in Prince William County and the cities of Manassas and Manassas Park.

Key areas of need were:

- An increase in financial hardship has forced residents to choose between meeting basic needs such as food, shelter, and utilities, and obtaining healthcare. In 2009, six percent of Prince William County residents lived in poverty.
- The community had a higher rate of uninsurance compared to peer counties and a lower rate of primary care physicians. The community would benefit from an increase in safety net services, but funding for such services has been limited.
- The community was in need of supportive housing and transportation, especially for the disabled, elderly, and low-income populations.
- Seniors required increased access to affordable in-home care, chronic disease management, and mental health services.
- Teen pregnancy rates and preventable hospital stays benchmarked unfavorably in the Greater Prince William County area compared to peer counties.

[37] Prince William Area Coalition for Human Services and Prince William United Way (2011) Greater Prince William County Community Needs Assessment. Retrieved 2011, from http://www.pwchs.org/Docs/2011_greater_prince_william_report.pdf

- The number of suicides in the area had been increasing since 2006.
- Investments in public libraries, health services programs and other initiatives have been made to serve youth in the county. The physical infrastructure and funding for sports fields and parks, transportation services, and youth programs were lacking in the county.

8. Virginia Department of Health

The Virginia Department of Health's Office of Minority Health and Public Health Policy published a report in 2011 entitled *Inequities in Birth Outcomes in Northern Virginia.*[38] That report sought to educate the community regarding the causes and effects of birth and infant health inequities while proposing frameworks to address these inequities.

The following disparities were identified in the report:

- Northern Virginia had lower rates of infant mortality and low birth weight infants than the commonwealth and nation in 2006. However, the rates for Black infant mortality and low birth weight were significantly higher than White or Hispanic rates.
- In Northern Virginia in 2006, the infant mortality rate was highest for Black residents at 10.4 deaths per 1,000 live births; White residents experienced 4.1 deaths per 1,000 live births and Hispanic (or Latino) residents experienced 3.6 deaths per 1,000 live births.
- In 2006, the infant mortality rate in Northern Virginia decreased as years of education increased. However, this was least pronounced for Black residents whose rates stayed higher than rates for non-Black residents at all education levels.

9. The Center for Nonprofit Development and Pluralism (Washington AIDS Partnership)

In 2010, The Center for Nonprofit Development and Pluralism developed a report funded by the Washington AIDS Partnership and Kaiser Permanente, entitled *The Profiles Project: How the Washington, DC Suburbs Respond to HIV/AIDS.*[39]

Important findings include:

- Black residents accounted for 48 percent of those living with HIV/AIDS in Northern Virginia; males accounted for 75 percent of those living with HIV/AIDS.
- Portability of care, defined as having the "ability to obtain HIV-related services from the same provider if s/he moves across jurisdictions within the eligible metropolitan area," is lacking in the region.

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[38] Virginia Department of Health. (2011) *Inequities in Birth Outcomes in Northern Virginia*. Retrieved 2011, from http://www.vdh.state.va.us/healthpolicy/policyanalysis/documents/Inequities-in-Birth-Outcomes-NOVA.pdf

[39] The Washington AIDS Partnership and Kaiser Permanente. (April 2010). *The Profiles Project: How the Washington, DC Suburbs Respond to HIV/AIDS*. Retrieved July 2012, from http://www.mosaica.org/Resources/HIVAIDS/ProfilesProject.aspx.

10. Loudoun County Health Department

In 2009, the Loudoun County Health Department published a report entitled *Loudoun County, Virginia Community Health Status Assessment.*[40] The Loudoun County Health Department also utilized the Mobilization for Action through Planning and Partnerships (MAPP) process to identify public health issues.

The results of that assessment are listed below:

- Loudoun County was ranked as the fourth best in the nation of the top 25 counties for job growth in 2008. Its unemployment rate in 2009 was at four percent, lower than regional, Virginia, and national averages.
- While many health services are available in the community, distance and transportation are issues for many residents, especially in the western portion of the county.
- Twelve percent of the community was uninsured.
- Ninety-four percent of residents were high school graduates and 53 percent have a bachelor's degree or higher.
- Alcohol abuse was a significant issue for youth. Fifty-four percent of students reported drinking alcohol in their lifetime.
- Air and water quality were environmental concerns in Loudoun County.
- The cancer mortality rate in Loudoun County at 27 percent was higher than regional, Virginia, and national averages.
- Incidences of Lyme disease, chlamydia, gonorrhea, and hepatitis-C had increased significantly since 2006.

11. Metropolitan Washington Council of Governments and Washington Regional Association of Grantmakers

The *Community Health Status Indicators for Metropolitan Washington,*[41] *2009*, published collaboratively by the Health Officials Committee of the Metropolitan Washington Council of Governments and the Health Working Group of the Washington Regional Association of Grantmakers, examined the health status of the region's residents with a particular focus on the social determinants of health.

The assessment included the following areas in the Metropolitan Washington region: Frederick, Montgomery, and Prince George's counties in Maryland, the counties of Arlington, Fairfax,

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[40] Loudoun County Health Department (July 2009) *Loudoun County, Virginia Community Health Status Assessment*. Retrieved 2011, from http://inter4.loudoun.gov/controls/speerio/resources/RenderContent.aspx?data=613306896ccb4d7391a0248c4b99bc00&tabid=340&fmpath=%2FHealth+Check

[41] Metropolitan Washington Council of Governments & Washington Regional Association of Grantmakers. (June 2009) *Community Health Status Indicators for Metropolitan Washington, 2009*. Retrieved 2012, from http://www.mwcog.org/uploads/pub-documents/zVZdWA20090623085814.pdf

Loudoun, and Prince William and cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park in Virginia, and the District of Columbia.

Key findings are as follows:

- The percentage of low-income adults who were uninsured was over 50 percent in all Virginia jurisdictions. Arlington County had the highest at 73 percent.
- In the city of Fairfax and the counties of Fairfax and Prince William, 12 to 15 percent of the population over five years of age did not speak English well.
- Fairfax, and Prince William counties and the cities of Fairfax, Falls Church, Manassas, and Manassas Park reported higher percentages of women not receiving prenatal care than the goal established by the federal government in Healthy People 2010.
- All jurisdictions reported breast cancer mortality rates higher than the Healthy People 2010 goal. The counties of Loudoun and Prince William, and the cities of Fairfax and Falls Church reported rates over the national average.
- Prince William County reported the highest number of mental or physical unhealthy days of the regions.
- Black infant mortality rates were higher than the national average in Prince William County and Manassas City.
- Stroke death rates in Manassas and Manassas Park cities were 87 and 95 per 100,000 population, respectively, compared to a national average of 53 per 100,000 population.
- Fairfax and Falls Church cities had motor vehicle injury death rates that were significantly higher than the national average of 15 per 100,000 population.
- Fairfax City had the highest suicide rate of all jurisdictions at 13 per 100,000 population compared to a national average of 11.
- The tuberculosis rate in Fairfax County was more than twice the national average.
- Over 15 percent of the population reported being obese in Fairfax, Loudoun, and Prince William counties and the city of Manassas. In the jurisdictions with available data, 67 percent or more adults do not eat five or more fruits and vegetables per day.
- Higher percentages of residents reported being current smokers in Prince William County and the city of Manassas compared to peer jurisdictions.

12. Voices for Virginia's Children

In 2009, Voices for Virginia's Children[42] compiled data from the surveys conducted in secondary schools in Northern Virginia, including data from the *Fairfax County Youth Survey* conducted by the Fairfax County Department of Neighborhood and Community Services and Fairfax County Public Schools. Surveys were conducted in Arlington, Fairfax, and Loudoun counties, and in the City of Alexandria.

Findings about youth health risk behaviors include the following:

- Although lower than the national averages, alcohol was the most commonly abused substance. In Fairfax County, 27 percent of 10th and 43 percent of 12th grader consumed alcohol in the last month. In Loudoun County, 31 percent of 10th and 43 percent of 12th graders consumed alcohol in the last month.
- Although lower than the national averages, marijuana was the most abused illicit drug in this region. In Fairfax County, nine percent of 10th graders and 17 percent of 12th graders used marijuana in the last month. In Loudoun County, 13 percent of 10th graders and 17 percent of 12th graders used marijuana in the last 30 days.

13. Prince William Area Coalition for Human Services and Prince William United Way, 2005

The 2005 Hispanic Needs Assessment Report,[43] published by the Prince William Area Coalition for Human Services and Prince William United Way, assessed data from a community survey and two focus groups to identify the unique needs of the Hispanic population in the Greater Prince William area. That area includes Prince William County and the cities of Manassas and Manassas Park.

Key findings included:

- Access to, as well as utilization and awareness of, available services were major concerns for the Hispanic (or Latino) population.
    - The assessment identified a need for an integrated, culturally competent community system that supports, values, and respects Hispanic (or Latino) families.
    - More information should be disseminated in Spanish through multiple communication outlets.

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[42] Voices for Virginia's Children (July 2009) *Self-Portrait of Youth in Northern Virginia*. Retrieved July 7, 2012, from http://vakids.org/pubs/NoVA/YouthSurvey_Web.pdf.

[43] Prince William Area Coalition for Human Services. (May 2005) *2005 Hispanic Needs Assessment Report – Greater Prince William Area*. Retrieved 2011, from http://www.pwchs.org/Docs/English_Report_Hispanic_Needs%20_Assessment_%20V30.pdf

    - The community also lacked access to a sufficient number of culturally competent and linguistically capable health professionals.
- In 2004, over 14 percent of the community's population was Hispanic (or Latino). A high percentage of this population is low income and required assistance meeting basic needs such as food and housing.
    - Eight percent of households received food stamps, 10 percent were without food, and 16 percent of households received reduced price lunches.
    - Thirty-eight percent of households occasionally ran out of money for basic needs in the past 12 months.
- Nationally, 34 percent of the Hispanic (or Latino) population was uninsured in 2004.
    - Twenty-five percent of respondent households had been without medical care and 54 percent had problems getting healthcare, mostly, 73 percent, due to financial constraints.
    - In 2004, 30 percent of households had gone without needed dental care or knew someone who did.
    - In 2005, 22 percent of respondents received Medicaid.
- The Hispanic (or Latino) community needed life skills education such as English as a second language instruction, banking and credit education, and parenting classes. Local ESL classes were at capacity, some maintaining waiting lists.
- Limited public transportation routes and hours have impeded this population's access to healthcare services.
- The community lacked affordable childcare. Residents reported difficulty finding childcare providers who spoke their language.
- Local health providers offering free or discounted care were operating at capacity and had long waiting lists.
- There had been a growing need for culturally appropriate domestic violence and substance abuse services in the community.

Secondary Data Indicators of Concern

This assessment analyzed secondary data regarding demographics, social and economic factors, health behaviors, morbidity, mortality, and physical environment. **Exhibit 60** presents the indicators that appeared most unfavorable in the Inova Fairfax community when compared to national, state, or local benchmarks. Further details and discussion regarding these indicators can be found in previous sections.

Exhibit 60A: Secondary Data Indicators of Concern

Category	Indicator	Location	Community Value	Benchmark	Data Format	Benchmark Definition
Demographics	Growth in "Other" (not Black, White, or Asian) population 2013-2018	Community	5.0%	0.3%	Percent	White population
	Growth in Asian population 2013-2018	Community	4.6%	0.3%	Percent	White population
	Growth in Hispanic population 2013-2018	Community	5.8%	1.0%	Percent	Non-Hispanic population
	Growth in 65+ population 2013-2018	Community	6.7%	1.8%	Percent	Community Average
	Residents 5+ who are linguistically isolated	Community	9.4%-15.0%	5.7%	Percent	VA average
Social and Economic Factors	Poverty rate: Total	Manassas	11.7%	11.1%	Percent	VA average
	Poverty rate: Asian	Prince William	11.6%	8.9%	Percent	VA Asian average
	Unemployment rate	Falls Church	6.7%	6.0%	Percent	VA average
		Manassas	6.1%	6.0%	Percent	VA average
	Unemployment rate: Asian	Loudoun	6.3%	5.8%	Percent	VA average
		Prince William	8.0%	5.8%	Percent	VA average
	Section 8 housing assistance wait time	Loudoun	20	10	Months	VA average
		Manassas Park	17	10	Months	VA average
		Prince William	13	10	Months	VA average
	Low-income households 2008	Mt. Vernon South/Ft. Belvoir	11.6%	6.3%	Percent	IFH service area total
		Lincolnia/Bailey's Crossroads	12.1%	6.3%	Percent	IFH service area total
		Manassas West	11.2%	6.3%	Percent	IFH service area total
	Uninsured population	Prince William	14.8%	13.1%	Percent	VA average
		Fairfax	13.5%	13.1%	Percent	VA average
	Medicaid discharges	Lincolnia/Bailey's Crossroads	19.3%	10.9%	Percent	IFH service area total
	Uninsured discharges	Woodbridge	9.9%	5.3%	Percent	IFH service area total
	Educational achievement	Manassas	117	131	County rank	Number of counties
		Manassas Park	77	131	County rank	Number of counties
	Family and social support	Manassas	73	131	County rank	Number of counties
	Births to women age 40-54	Fairfax City	4.5%	2.7%	Percent	U.S. average
		Fairfax	5.5%	2.7%	Percent	U.S. average
		Falls Church	6.1%	2.7%	Percent	U.S. average
		Loudoun	4.1%	2.7%	Percent	U.S. average
	No prenatal care in first trimester	Manassas	26.1%	14.5%	Percent	VA average
		Manassas Park	33.3%	14.5%	Percent	VA average
		Prince William	20.8%	14.5%	Percent	VA average
	Births to women under 18	Manassas Park	3.5%	3.4%	Percent	U.S. average

Source: Verité analysis of secondary data.

Exhibit 60B: Secondary Data Indicators of Concern

Category	Indicator	Location	Community Value	Benchmark	Data Format	Benchmark Definition
Health Behaviors	Diet and Exercise	Manassas Park	69	131	County rank	Number of counties
	Alcohol use	Falls Church	76	131	County rank	Number of counties
		Fairfax	84	131	County rank	Number of counties
		Loudoun	72	131	County rank	Number of counties
		Prince William	78	131	County rank	Number of counties
	Unsafe sex	Fairfax City	83	131	County rank	Number of counties
		Manassas	99	131	County rank	Number of counties
		Manassas Park	100	131	County rank	Number of counties
	Current smoker	Manassas	28.6%	16.4%	Percent	VA average
	Heavy drinkers	Fairfax	8.9%	4.4%	Percent	VA average
		Loudoun	7.3%	4.4%	Percent	VA average
	Binge drinkers	Fairfax	12.7%	9.7%	Percent	VA average
		Prince William	11.8%	9.7%	Percent	VA average
Health Outcomes: Morbidity	Asthma	Fairfax City	17.4%	8.9%	Percent	VA average
		Prince William	10.3%	8.9%	Percent	VA average
	Diabetes	Manassas	14.3%	13.1%	Percent	VA average
	Obesity/Overweight	Fairfax City	78.3%	61.9%	Percent	VA average
		Manassas	71.4%	61.9%	Percent	VA average
		Prince William	64.0%	61.9%	Percent	VA average
	Poor dental health	Fairfax City	17.4%	13.9%	Percent	VA average
		Manassas	14.3%	13.9%	Percent	VA average
	Reported poor physical health	Fairfax City	13.0%	9.1%	Percent	VA average
	Very low birth weight infants	Falls Church	1.7%	1.5%	Percent	U.S. average
		Falls Church	3.4%	1.6%	Percent	VA average
	Breast cancer incidence	Fairfax	6	35	Health district rank	Bottom 50% health districts
	Prostate cancer incidence	Prince William	17	35	Health district rank	Bottom 50% health districts
	Ovarian cancer incidence	Fairfax	16	35	Health district rank	Bottom 50% health districts
	Syphilis diagnoses	Falls Church	8.1	6.5	Rate per 100,000	VA average
	Chlamydia diagnosis	Falls Church	486.5	393.2	Rate per 100,000	VA average
	Residents living with HIV/AIDS	Falls Church	1,597.5	297.6	Rate per 100,000	VA average
		Fairfax City	1,050.3	297.6	Rate per 100,000	VA average
		Manassas	597.6	297.6	Rate per 100,000	VA average
	Tuberculosis	Community	3.7-7.2	2.7	Rate per 100,000	VA average

Source: Verité analysis of secondary data.

Exhibit 60C: Secondary Data Indicators of Concern

Category	Indicator	Location	Community Value	Benchmark	Data Format	Benchmark Definition
Health Outcomes: Mortality	Hispanic infant mortality	Fairfax City	8.9	5.6	Rate per 1,000 live births	U.S. average
		Loudoun	8.3	5.6	Rate per 1,000 live births	U.S. average
	Black non-Hispanic infant mortality	Loudoun	18.7	13.6	Rate per 1,000 live births	U.S. average
		Manassas	20.9	13.6	Rate per 1,000 live births	U.S. average
	Neonatal infant mortality	Prince William	4.7	4.5	Rate per 1,000 live births	U.S. average
	Post-neonatal infant mortality	Falls Church	3.3	2.3	Rate per 1,000 live births	U.S. average
	Infant mortality	Manassas Park	47.6	6.8	Rate per 1,000 live births	VA average
	Homicide	Fairfax City	9.5	6.1	Rate per 100,000	U.S. average
		Manassas	7.3	6.1	Rate per 100,000	U.S. average
	Breast cancer	Fairfax City	49.8	24.1	Rate per 100,000	U.S. average
		Falls Church	59.1	24.1	Rate per 100,000	U.S. average
		Loudoun	32.0	24.1	Rate per 100,000	U.S. average
		Manassas	32.6	24.1	Rate per 100,000	U.S. average
	Colon cancer	Fairfax City	42.1	17.5	Rate per 100,000	U.S. average
		Manassas Park	50.4	17.5	Rate per 100,000	U.S. average
	Lung cancer	Fairfax City	87.5	52.6	Rate per 100,000	U.S. average
		Manassas Park	115.8	52.6	Rate per 100,000	U.S. average
	Stroke	Manassas	79.9	47.0	Rate per 100,000	U.S. average
		Manassas Park	106.6	47.0	Rate per 100,000	U.S. average
	Parkinson's disease	Fairfax City	8.9	6.5	Rate per 100,000	VA average
	Hypertension and renal disease	Fairfax City	13.3	7.4	Rate per 100,000	VA average
	Unintentional injury	Falls Church	43.1	39.1	Rate per 100,000	U.S. average
		Fairfax City	44.3	32.1	Rate per 100,000	VA average
	Diabetes	Fairfax City	26.6	19.1	Rate per 100,000	VA average
	Influenza and pneumonia	Falls Church	24.3	14.8	Rate per 100,000	VA average
		Manassas	29.1	14.8	Rate per 100,000	VA average
	Suicide	Fairfax City	26.6	12.3	Rate per 100,000	VA average
Physical Environment	Environmental quality	Community	110-131	131	County rank	Number of counties
	Built environment	Manassas Park	94	131	County rank	Number of counties
		Prince William	67	131	County rank	Number of counties
	Community safety	Falls Church	85	131	County rank	Number of counties
		Manassas	121	131	County rank	Number of counties
		Manassas Park	73	131	County rank	Number of counties
		Prince William	72	131	County rank	Number of counties
	Violent crime	Manassas	379.8	217.9	Rate per 100,000	VA average
	Food desert	Community	Present	N/A	N/A	No benchmark

Source: Verité analysis of secondary data.

PRIMARY DATA ASSESSMENT

Community input was gathered through interviews and a community web-based survey. Findings from this primary data are presented below.

Interview Findings

Interviews regarding health needs in the community served by Inova Fairfax were conducted with 45 key informants, including external stakeholders (those not affiliated with Inova Fairfax or the Inova Health System) and internal Inova staff. The interviews provided input on a wide range of community health issues, including barriers to access to health services, changes in community population, prevalence of certain health conditions, social determinants of health, health disparities, and other topics. The interviews were guided by a structured interview guide, and interviewees were encouraged to identify and discuss all current and emerging issues affecting community health.

Verité staff summarized all interview comments and assessed the frequency with which community health issues were mentioned and also assessed informant views regarding the severity of each concern. The following issues are considered of greatest concern to community health, based on that assessment.

- **Access Issues**
    - **Lack of Affordable Care.** Interviewees expressed concern about the cost of health services for primary care, specialty care, and medication– in particular for community residents who are low-income, uninsured or underinsured, immigrants, or undocumented. This is also an issue for insured, low-wage earners due to high co-pays and deductibles. The current safety net increasingly is resource constrained and unable to meet growing demand. Interviewees report high emergency room utilization by low-income and uninsured populations.
    - **Lack of Access to and Affordability of Insurance.** Health insurance is unaffordable for many lower-income residents. Minority populations, recent immigrants, and undocumented people are most vulnerable to these concerns. A number of interviewees mentioned that Medicare beneficiaries have difficulty affording supplemental insurance. Interviewees mentioned residents in parts of Loudoun County and the Mt. Vernon area as being most vulnerable to these concerns.
    - **Lack of Access to and Low Usage of Preventive Care Services.** A number of interviewees raised concerns about access to prevention services, in particular for low-income and undocumented community members. Interviewees mentioned that reimbursement issues affect the amount of preventive care that is provided. These issues are most prevalent in parts of Loudoun County and Prince William County. Additionally, many immigrants and young adults are choosing not to access preventive care services or get recommended immunizations.
    - **Lack of Collaboration Among Providers.** Interviewees encouraged greater collaboration among providers in the Inova Fairfax community. Interviewees

noted that community organizations work in "silos" that negatively impact the care provided to residents. Several interviewees mentioned the need for more integration between safety net providers and other hospital, primary care, specialty care, and mental health care providers.

- **Lack of Mental Health Services.** Virtually all interviewees cited a lack of mental health services as a major concern. Community members who have limited English proficiency experience language barriers when seeking counseling. Veterans returning to the area from war, those who are severely mentally ill, persons requiring inpatient treatment, and children are experiencing significant challenges accessing mental health care. Although this was identified as a problem for all age groups and income levels, interviewees mentioned low-income residents as most vulnerable to these concerns. Interviewees reported long waiting lists at safety-net clinics.
- **Lack of Affordable and Accessible Dental Care.** Access to dental care was frequently mentioned and dental insurance is unaffordable for many residents. Such access is particularly problematic for low-income, uninsured, or undocumented adults and for Hispanics or Latinos. Interviewees noted a gap in services for adult Medicaid beneficiaries and those slightly above the poverty line. Existing dental clinics are unable to meet current and growing demand due to long waiting lists and the cost of providing services. Residents in the eastern part of Loudoun County and Prince William County are most vulnerable to these concerns.
- **Lack of Providers and Physicians (Including Specialists).** The Inova Fairfax area is experiencing an undersupply of physicians despite population growth. Interviewees mention the following types of gaps: primary care physicians, mental health providers, and dentists who accept Medicaid, Medicare, and new patients; specialists and psychiatrists willing to provide on-call coverage; endocrinologists; obstetricians for complex cases; and specialists who accept Medicaid (leading to the need to refer specialty care for Medicaid and uninsured people to the University of Virginia). Additionally, there is a need for obstetrics and pediatrics in Prince William County. Interviewees mentioned the low-income and homeless populations as most vulnerable to these concerns.
- **Lack of Case Management and Services for Seniors**. The aging of the population is leading to a need for increased community-based care for seniors. Additionally, seniors are in need of chronic disease management, education about self-management of disease, and care that is sensitive to comorbidities, as well as mental health and psychosocial issues.
- **Transportation Barriers.** Certain residents of the community also experience access barriers due to transportation problems. These problems have the largest impact on seniors, the low-income, those who need to travel long distances for care, and persons living in the western parts of Fairfax County and Sterling. Residents who rely on public transportation frequently must utilize multiple forms of public transportation to access care, while residents traveling by car are

impacted by traffic congestion, particularly during rush hour. Transportation barriers contribute to high no-show rates as safety net clinics.

- **Morbidity/Health Status Issues**
  - **Mental and Behavioral Health.** Poor mental health increasingly is prevalent in the community for children and those suffering from stress, depression, and anxiety. Many people have co-morbid physical and mental health conditions. Stigmas prevent certain cultural groups from seeking mental health services.
  - **Rates of Obesity/Overweight.** Virtually all informants mention obesity/weight as a major problem area. The prevalence of obesity is highest in low-income, minority populations; stress and sedentary lifestyles also contribute. Many interviewees recommended a major focus on children and adolescents.
  - **Rates of Diabetes.** Several interviewees expressed concern over the rates of diabetes in children, and the difficulty treating complex patients with co-morbid conditions. Uninsured and underinsured residents who are not eligible for prescription assistance are unable to manage this chronic disease.
  - **Rates of Cardiovascular Disease.** Residents expressed concern over growing rates of cardiovascular disease, especially in low-income and minority populations. Poor diet and exercise, as well as stress, are contributing factors.
  - **Rates of High Blood Pressure.** Interviewees expressed concern over the impact of stress on the rates of high blood pressure.
  - **Alcohol Use.** Several interviewees mentioned the prevalence of alcohol abuse as problematic, including among higher-income community residents, adolescents, the homeless, and immigrants. Some expressed concern about public drunkenness, while others express concern over residents who self-medicate.
  - **Poor Dental Health.** Lack of access to dental services is contributing to poor dental health. The homeless, low-income, and recent immigrants are particularly vulnerable. A lack of dental care for vulnerable populations is "one of the biggest" problems in the community. Many residents delay seeking care.
  - **Smoking.** Residents note high rates of smoking in the Inova Fairfax community, especially among teenagers, young adults, and blue collar workers.
  - **Poor Diet and Exercise.** Several interviewees mentioned poor diet and exercise as problematic, especially among youth. Access to healthy food is difficult for low-income populations and residents in Bailey's Crossroads.
- **Social and Economic Issues**
  - **Basic Needs Insecurity: Food, Housing, Utilities.** Many interviewees indicated that certain lower-income groups of community residents and immigrants are experiencing problems with access to healthy food and a lack of affordable housing. Residents also noted that there are areas of over-occupied houses and apartments, particularly in Reston/Herndon and along the Route 1 corridor. Housing costs frequently are a high percentage of a resident's income.

- **Cultural/Language Barriers.** The area's immigrant and minority population face barriers to accessing health and social services. Linguistic isolation and a lack of health system knowledge contribute to these barriers. Many recent immigrants attach a stigma to seeking certain healthcare services, while undocumented residents fear potential repercussions of seeking services. This is particularly prevalent in Prince William County.
- **Financial Hardship and Unemployment.** Although the area as a whole is wealthy, pockets of poverty are present. Several interviewees mentioned that low-income residents, as well as ex-offenders, are particularly vulnerable.
- **Lack of Community Health Education.** Interviewees mentioned that many residents are not informed about breastfeeding, chronic disease management, correct usage of medication, and the importance of dental health. Residents suggested that health education programs be aimed toward children, immigrants, and young adults. Additionally, many residents, especially recent immigrants, lack health literacy and knowledge about how to navigate the health care system. The area lacks culturally sensitive health education.

Community Survey Findings

Inova Fairfax sought input from the public regarding the health of the community through an online survey. The community survey was publicized through mailings and flyers, and a link was made available on the Inova Health System's website to an electronic survey instrument from May through August 2012. The survey consisted of 33 questions about respondent demographics and a range of health status and access issues.

1. Respondent Characteristics

A total of 707 residents from the Inova Fairfax community completed the survey. The majority of respondents reported being in good or very good overall health, between the ages of 35 and 64, married, employed, Christian, and White. Eighty-six percent of respondents were female and 14 percent were male.

Additional characteristics of the survey participants are as follows:

- The majority (89 percent) of respondents speak English in the home and speak English very well (86 percent). Spanish was the top non-English language reported. Of those respondents who speak a language other than English in the home, 77 percent reported speaking English less than "very well."
- Forty-one percent of respondents know someone with a disability.
- Approximately four percent of respondents reported being unemployed.

Exhibit 61 presents the percentage of respondents from each subregion. The subregions with the highest percentage of respondents were Annandale/North Springfield, East Fairfax 29/50 Corridor, and GMU/Burke.

Exhibit 61: Survey Responses, 2012 – Respondents by Subregion

Subregion	Percent of Respondents
Annandale/North Springfield	10.0%
Centreville	4.2%
Chantilly	0.7%
Clifton/Fairfax Station	2.7%
Dale City/Dumfries/Quantico	2.4%
East Fairfax 29/50 Corridor	9.1%
Fairfax City	4.8%
Franconia/Kingstowne	4.4%
Gainesville/Haymarket/Bull Run	1.0%
GMU/Burke	9.1%
Lake Ridge/Occoquan	1.1%
Lincolnia/Bailey's Crossroads	4.7%
Lorton/Newington	1.4%
Manassas East	0.6%
Manassas West	1.3%
McLean/Great Falls	3.1%
Mt. Vernon South/Ft. Belvoir	5.0%
Oakton/Fair Lakes/South Herndon	5.5%
Reston/Herndon	4.8%
South Riding/Aldie	2.4%
Springfield	7.8%
Sterling/Dulles	5.7%
Vienna	5.0%
West Falls Church	1.8%
Woodbridge	1.6%
Total Responses	**707**

Source: Inova Community Survey, 2012.

55 of the community's 64 ZIP codes were represented in the survey

…

The subregion of Annandale/North Springfield had the highest percentage of respondents at 10%

It is important to consider the generalizability of a survey sample. The survey respondents do not adequately represent the diversity of the community. Accordingly, caution should be used when assessing the data presented below.

2. Health Issues

When asked to identify the top health issues in the Inova Fairfax community, respondents most often chose obesity, heart disease, and diabetes. Seven percent of the community respondents chose "Other" as a top health issue. Due to the small sample size of Inova Fairfax community respondents who chose "Other," these data are reported based on responses from the Inova Health System as a whole. The most prevalent responses included Lyme disease, "lifestyle issues," and high blood pressure (**Exhibit 62**).

Exhibit 62: Survey Responses, 2012 – Top Health Issues

Response	Percent of Respondents*
Obesity	75.6%
Heart disease	63.8%
Diabetes	63.6%
Cancer	54.9%
Mental health: depression, bipolar, autism	41.5%
Addiction / Substance abuse	27.8%
Asthma	26.4%
Alzheimer's or dementia	25.1%
Tobacco use	24.9%
Stroke	16.6%
Osteoporosis	9.7%
Other	7.0%
HIV / Sexually transmitted diseases	5.4%
Birth defects	1.4%
Hepatitis A	0.4%

*Percentages are based on the number of Inova Fairfax respondents who identified top health issues in the community.
N = 698

"Other" Responses	Percent of Responses*
Lyme disease	17.5%
Lifestyle issues	15.0%
High blood pressure	12.5%
Access to care	7.5%
Aging needs	7.5%
Disability	6.3%
Lack of chronic disease management	5.0%
Mental health	5.0%
Communicable diseases	5.0%
Neurology	3.8%
Allergies	2.5%
Oral Health	1.3%
ADHD	1.3%
Pediatrics	1.3%
Auto-immune disorders	1.3%
Parkinson's	1.3%
Poverty	1.3%
Transportation	1.3%
COPD	1.3%
Family planning	1.3%
Cultural barriers to care	1.3%

*Percentages are based on the number of "Other" responses received from the Inova Health System respondents as a whole.
N = 80
Source: Inova Community Survey, 2012.

3. Barriers to Access

The survey included questions about access to and utilization of health services. The majority of participants reported having some form of health insurance, having a usual source of care, and visiting a doctor regularly. Six percent of respondents reported being uninsured.

Exhibit 63 identifies the facility or provider at which respondents and their families receive routine medical care. Of those respondents who do not seek routine medical care from a private medical professional, the majority attend urgent care facilities or store-based walk-in clinics. Uninsured respondents are more likely to seek care at a free or low-cost clinic or health center or the emergency room when compared to those with private coverage.

Exhibit 63: Survey Responses, 2012 – Routine Medical Care

Response	Insurance Coverage		
	All Types	Private Coverage	Uninsured/ Medicaid
Private medical professional (MD, APN, PA)	87.6%	93.6%	21.7%
Urgent care facility or store-based walk-in clinic	8.7%	8.7%	10.9%
Hospital emergency room	6.6%	3.1%	39.1%
Free or low-cost clinic or health center	5.7%	0.8%	63.0%
Other	4.9%	4.2%	2.2%
Provider of alternative medicine	3.7%	3.7%	2.2%
No routine medical care received	3.0%	1.5%	28.3%

All Types (N=700), Private Coverage (N=519), Uninsured/Medicaid (N=46).
Source: Inova Community Survey, 2012.

Exhibit 64 presents the accessibility of various types of health care. Few respondents had difficulty accessing basic medical care. Survey data indicate that dental care, medical specialty care, and medicine and supplies are less accessible. Fifteen percent of respondents reported rarely or never being able to get needed mental health care – the least accessible of the five health care types.

Exhibit 64: Survey Responses, 2012 – Able to Get Needed Care

Response	Percent of Respondents				
	Basic Medical Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine and Supplies
Always	91.6%	85.5%	72.3%	82.9%	86.4%
Sometimes	6.0%	9.2%	12.7%	10.9%	9.8%
Rarely	1.9%	3.4%	4.7%	2.8%	2.8%
Never	0.6%	1.9%	10.3%	3.4%	1.0%

Basic Medical Care (N=702), Dental Care (N=697), Mental Health Care (N=622), Medical Specialty Care (N=679), Medicine and Supplies (N=685)
Source: Inova Community Survey, 2012.

Exhibit 65 presents the percentage of respondents who reported "always" being able to get needed care by subregion; data indicate that access varies by type of care and locality. A higher percentage of respondents from Manassas West and Lincolnia/Bailey's Crossroads reported difficulty accessing care compared to other subregions. Across all subregions, fewer people were able to get mental health care, medical specialty care, and dental care.

Exhibit 65: Survey Responses, 2012 – Always Able to Get Needed Care by Subregion

Subregion	Percent of Respondents				
	Basic Medical Care	Dental Care	Mental Health Care	Medical Specialty Care	Medicine and Supplies
Annandale/North Springfield	95.7%	92.9%	74.1%	91.0%	90.9%
Centreville	93.3%	90.0%	81.5%	85.7%	89.7%
Chantilly*	80.0%	80.0%	80.0%	80.0%	80.0%
Clifton/Fairfax Station	100.0%	94.7%	88.2%	94.7%	100.0%
Dale City/Dumfries/Quantico	82.4%	76.5%	57.1%	76.5%	82.4%
East Fairfax 29/50 Corridor	81.3%	73.0%	62.5%	76.7%	76.6%
Fairfax City	94.1%	85.3%	64.5%	85.3%	87.9%
Franconia/Kingstowne	93.5%	87.1%	72.0%	89.7%	90.3%
Gainesville/Haymarket/Bull Run*	100.0%	100.0%	100.0%	100.0%	100.0%
GMU/Burke	96.9%	95.3%	74.5%	86.7%	90.0%
Lake Ridge/Occoquan*	87.5%	100.0%	62.5%	71.4%	75.0%
Lincolnia/Bailey's Crossroads	81.3%	74.2%	60.0%	74.2%	74.2%
Lorton/Newington*	100.0%	100.0%	77.8%	88.9%	100.0%
Manassas East*	100.0%	75.0%	75.0%	100.0%	75.0%
Manassas West*	71.4%	71.4%	50.0%	66.7%	71.4%
McLean/Great Falls	95.5%	90.9%	87.5%	90.9%	95.2%
Mt. Vernon South/Ft. Belvoir	79.4%	75.8%	48.3%	72.7%	72.7%
Oakton/Fair Lakes/South Herndon	89.7%	89.7%	76.3%	76.3%	84.2%
Reston/Herndon	85.3%	73.5%	63.3%	70.6%	76.5%
South Riding/Aldie	94.1%	82.4%	82.4%	76.5%	88.2%
Springfield	96.4%	92.7%	83.7%	88.9%	96.3%
Sterling/Dulles	97.5%	76.3%	54.3%	71.8%	76.9%
Vienna	100.0%	91.4%	97.1%	94.3%	97.1%
West Falls Church	100.0%	92.3%	92.3%	92.3%	92.3%
Woodbridge	81.8%	63.6%	70.0%	72.7%	100.0%
All Subregions	**91.6%**	**85.5%**	**72.3%**	**82.9%**	**86.4%**

Key	
Least able to get needed care (bottom 25% of responses)	
Small sample size (N=10 or less)	*

Basic Medical Care (N=702), Dental Care (N=697), Mental Health Care (N=622), Medical Specialty Care (N=679), Medicine and Supplies (N=685)
Source: Inova Community Survey, 2012.

Respondents indicating they are not always able to get care were asked to identify barriers to access (**Exhibits 67 and 68**). Cost and lack of insurance were the two most frequently reported barriers to care.

Data indicate that females had more difficulty with cost of care and getting appointments than males, while males more often cited inconvenient hours and lack of transportation as barriers to access. Females also were more likely than males to lack insurance for all care types with the exception of dental care (**Exhibit 67**).

Exhibit 66: Survey Responses, 2012 – Barriers to Care

Type of Care and Sex	Percent of Respondents								Total Respondents (N)
	Can't Afford It	Can't Get Appointment	Inconvenient Hours	Lack of Transportation	Lack of Trust	Language Barrier	No Insurance	Other	
Male									
Basic Medical Care	28.6%	0.0%	28.6%	14.3%	0.0%	0.0%	57.1%	14.3%	(7)
Dental Care	55.6%	0.0%	11.1%	11.1%	0.0%	0.0%	55.6%	22.2%	(9)
Mental Health Care	21.4%	7.1%	7.1%	7.1%	0.0%	0.0%	14.3%	64.3%	(14)
Medical Specialty Care	44.4%	11.1%	11.1%	11.1%	0.0%	0.0%	22.2%	44.4%	(9)
Medicine and Medicinal Supplies	50.0%	0.0%	16.7%	16.7%	0.0%	0.0%	33.3%	50.0%	(6)
Female									
Basic Medical Care	50.8%	16.4%	11.5%	6.6%	0.0%	8.2%	59.0%	8.2%	(61)
Dental Care	68.1%	2.2%	4.4%	4.4%	2.2%	5.5%	51.6%	6.6%	(91)
Mental Health Care	37.7%	12.6%	4.4%	2.5%	6.9%	4.4%	22.0%	45.3%	(159)
Medical Specialty Care	48.5%	15.5%	10.3%	5.2%	0.0%	5.2%	43.3%	15.5%	(97)
Medicine and Medicinal Supplies	67.9%	1.3%	2.6%	5.1%	1.3%	6.4%	42.3%	16.7%	(78)
Total									
Basic Medical Care	48.5%	14.7%	13.2%	7.4%	0.0%	7.4%	58.8%	8.8%	(68)
Dental Care	67.0%	2.0%	5.0%	5.0%	2.0%	5.0%	52.0%	8.0%	(100)
Mental Health Care	36.4%	12.1%	4.6%	2.9%	6.4%	4.0%	21.4%	46.8%	(173)
Medical Specialty Care	48.1%	15.1%	10.4%	5.7%	0.0%	4.7%	41.5%	17.9%	(106)
Medicine and Medicinal Supplies	66.7%	1.2%	3.6%	6.0%	1.2%	6.0%	41.7%	19.0%	(84)

Source: Inova Community Survey, 2012.

Exhibit 67 presents the responses of residents from the entire Inova Health System who chose "Other" as a barrier to care. Due to the small sample size of Inova Fairfax community respondents who chose "Other," these data are reported based on responses from the Inova Health System as a whole. Sixty-six percent of all "Other" responses stated that residents did not need one or more of the care types listed. The most common "Other" barriers reported include lack of services and in-plan providers for adult and pediatric mental health, difficulty with referrals and care coordination for specialty care, and insufficient health insurance coverage.

Exhibit 67: Survey Responses, 2012 – "Other" Barriers to Care

"Other" Responses	Percent of "Other" Responses*
Do Not Need Services	65.5%
Basic Medical Care	
Lack of primary care providers	0.6%
Dental Care	
Lack of in-plan providers	0.6%
Mental Health	
Lack of services and in-plan providers	5.2%
No description	3.4%
Lack of services and in-plan providers for pediatric mental health	2.9%
Insufficient insurance coverage	2.3%
Stigma regarding mental health treatment	1.7%
Difficulty navigating insurance	0.6%
Specialty Care	
Difficulty with referrals/care coordination	2.3%
Lack of services and in-plan providers	1.7%
Lack of convenient appointment times	0.6%
Medicine and Supplies	
Insufficient medication coverage	3.4%
Uninsured	0.6%
Doctor-related prescription issues	0.6%
Pharmacy-related prescription issues	0.6%
Inconvenience	0.6%
General	
Insufficient insurance coverage	2.9%
Difficult for disabled residents to access services and providers	1.1%
Lack of Medicare providers and insufficient coverage	0.6%
Difficulty navigating insurance	0.6%
Lack of providers	0.6%
Uninsured or underinsured	0.6%
No description	0.6%

*Percentages are based on the number of "Other" responses received from the Inova Health System respondents as a whole.
N= 174
Source: Inova Community Survey, 2012.

4. Health Behaviors

Respondents were asked about health risk behaviors and outcomes as well as the vaccines and screenings they have received.

Exhibit 68 illustrates the percentage of residents who reported adverse risk behaviors and outcomes. Being overweight and not exercising on a regular basis were the most frequently cited behaviors in the community.

Exhibit 68: Survey Responses, 2012 – Risk Behaviors

Behaviors	Percent of Respondents	Total Respondents (N)
Overweight	51.4%	(694)
No regular exercise	45.0%	(686)
Former smoker	33.3%	(693)
Children or grandchildren overweight	16.9%	(697)
Current smoker/tobacco user	4.4%	(707)

Source: Inova Community Survey, 2012.

The majority of respondents reported being overweight

Exhibit 69 presents the percentage of respondents who reported receiving certain vaccines by sex and age cohort. The percentage of respondents aged 45 and older who received hepatitis A and B vaccines, females aged 15 to 44 who received pneumonia vaccines, and males aged 45+ who received Tdap vaccines compared unfavorably to other cohorts. Forty percent or fewer respondents reported receiving human papillomavirus (HPV), meningococcal, varicella, and zoster vaccines.

Exhibit 69: Survey Responses, 2012 – Vaccines

Vaccine	Percent of Respondents by Age			
	Males 15-44	Females 15-44	Males 45+	Females 45+
Flu / influenza in the last year	80.0%	76.2%	88.2%	91.0%
Hepatitis A	60.0%	40.1%	21.1%	22.5%
Hepatitis B	60.0%	53.5%	26.3%	40.1%
Human papillomavirus (HPV) before the age of 26	13.3%	14.5%	-	-
Meningococcal	40.0%	22.7%	6.6%	4.0%
MMR (measles, mumps, rubella) if you were born after 1957	80.0%	67.4%	-	-
Pneumonia / pneumococcal	40.0%	12.2%	40.8%	32.4%
Tdap (tetanus, diphtheria, pertussis) every 10 years	73.3%	67.4%	36.8%	55.4%
Varicella (chicken pox) if you've never had chicken pox	20.0%	22.7%	11.8%	9.0%
Zoster (shingles) if you are age 60+	-	-	27.6%	21.5%

Males 15-44 (N = 15), females 15-44 (N = 172), males 45+ (N = 76), females 45+ (N = 377)
Source: Inova Community Survey, 2012.

Exhibit 70 identifies the percentage of respondents who reported receiving certain health screenings by sex and age cohort. The percentage of females aged 45 and older who were screened for cervical cancer and the percentage of females aged 15-44 who were screened for high cholesterol compared unfavorably to other cohorts. Fewer than 40 percent of respondents reported being screened for sexually transmitted infections.

Exhibit 70: Survey Responses, 2012 – Health Screenings

Preventive Screening	Percent of Respondents by Age			
	Males 15-44	Females 15-44	Males 45+	Females 45+
Breast cancer (mammogram) in the last year	-	-	-	84.8%
Colorectal cancer (colonoscopy) in the last 5 years	-	-	72.8%	65.7%
Cervical cancer (Pap test)	-	77.4%	-	57.4%
High cholesterol	91.7%	69.2%	88.9%	81.2%
High or low blood pressure	91.7%	79.9%	92.6%	85.0%
High or low blood sugar	66.7%	61.6%	77.8%	66.2%
Prostate cancer in the last year	-	-	66.7%	-
Sexually transmitted infections	25.0%	37.7%	12.3%	10.9%

Males 15-44 (N = 12), females 15-44 (N = 159), males 45+ (N = 81), females 45+ (N = 394)
Source: Inova Community Survey, 2012.

Individuals Privding Community Input

Forty-five key stakeholders participated in the interview process. The 45 stakeholders were comprised of public health experts; individuals from health or other departments and agencies; leaders or representatives of medically underserved, low-income, and minority populations; and other community members **(Exhibits 71, 72, 73, and 74**).

1. Public Health Experts

Individuals interviewed with special knowledge of or expertise in public health include (**Exhibit 71**):

Exhibit 71: Public Health Experts Interviewed

Name	Title	Affiliation or Organization	Special Knowledge or Expertise
Dr. Gloria Addo-Ayensu	Health Director	Fairfax County Health Department	Through her work at the Fairfax County Health Department, Dr. Addo-Ayensu has specialized knowledge of the public health needs of Fairfax County residents.
Anthony Burchard	President	Inova Health System Foundation	Mr. Burchard has special expertise in public health due to his time funding and planning public health programs through Project Hope.
Debra Dever	Executive Director	Loudoun Community Health Center	Through her work at community health centers across the country, Ms. Dever has special knowledge of the public health needs of community health center patients.
Dr. David Goodfriend	Health Director	Loudoun County Health Department	Through his work at the Loudoun County Health Department, Dr. Goodfriend has specialized knowledge of the public health needs of Loudoun County residents.
Dr. Charles Konigsberg, Jr.	Board Vice President	Alexandria Neighborhood Health Services Inc.	Dr. Konigsberg has special expertise in public health through his career in health departments in four states; he is the former Health Director at the Alexandria City Health Department.

2. Health or Other Departments or Agencies

Several interviewees were from departments or agencies with current data or other information relevant to the health needs of the Inova Fairfax community (**Exhibit 72**). This list excludes the public health experts identified in **Exhibit 72**.

Exhibit 72: Individuals from Health Departments or Agencies Interviewed

Name	Title	Affiliation or Organization
Janet Clarke	Vice Chair	Loudoun County Board of Supervisors
Rosalyn Foroobar	Deputy Director of Health	Fairfax County Health Department
Ellen Grunewald	Director	Loudoun County Department of Family Services
Scott York	Chairman-at-Large	Loudoun County Board of Supervisors

3. Community Leaders and Representatives

The following individuals were interviewed because they are leaders or representatives of medically underserved, low-income, and/or minority populations (**Exhibit 73**). This list excludes the public health experts identified in **Exhibit 72**.

Exhibit 73A: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Nature of Leadership Role
Mary Agee	Executive Director	Northern Virginia Family Services	Mrs. Agee represents the underserved patients who receive services at Northern Virginia Family Services and the low-income workers who are connected with healthcare jobs through the Training Futures program.
George Barker	Senator	Virginia General Assembly	Senator Barker represents vulnerable populations in Northern Virginia who seek public health services.
Dr. Ji-Young Cho	Program Director	Korean Community Service Center of Greater Washington	Dr. Cho serves as a leader of the Asian American community who utilize services and programs through the Korean Community Service Center of Greater Washington.
Janet Clarke	Vice Chair	Loudoun County Board of Supervisors	Ms. Clarke has helped with outreach to youth by establishing a Teen Center in Purcellville and writing Youth Teen Activities Directory for western Loudoun County. She also has experience working in Loudoun County Public Schools.
Rosalyn Foroobar	Deputy Director of Health	Fairfax County Health Department	Dr. Foroobar represents the low-income and uninsured residents receiving health services through the health department.
Brett Fuller	Pastor	Grace Covenant Church	Mr. Fuller represents the residents of Fairfax County that attend Grace Covenant Church.
Denise Garcia	ADA Compliance Administrator	Inova Health System	Ms. Garcia represents populations in Northern Virginia who require resources and facilities that are ADA compliant.
Jean Glossa	Medical Director	Community Health Care Network	Dr. Glossa represents the uninsured receiving needed care through Fairfax County's Community Health Care Network (CHCN).
Ellen Grunewald	Director	Loudoun County Department of Family Services	Dr. Grunewald represents the population that the Loudoun County Department of Family Services assists, including children, adolescents, low-income families, and the elderly.
Andy Johnston	Executive Director	Loudoun Cares	Mr. Johnston represents underprivileged residents receiving services through Project H.O.M.E., Loudoun Cares, and the Loudoun United Way.

Exhibit 73B: Community Leaders or Representatives Interviewed

Name	Title	Affiliation or Organization	Nature of Leadership Role
Mary Kealy, EDD	Assistant Superintendent for Pupil Services	Loudoun County Public Schools	Dr. Kealy represents children through her work in Loudoun County Public Schools.
Nancy Markley, RN, BSN, NCSN	Supervisor of Student Health Services	Loudoun County Public Schools	Ms. Markley serves as a representative of the students who receive health services at Loudoun County schools.
Nury Marquez	Executive Director	Hispanic Committee of Virginia	Ms. Marquez is an active community leader who represents the Hispanic population in Northern Virginia.
Christina Stevens	Program Director	Community Health Care Network	Ms. Stevens represents the uninsured residents receiving services through the Fairfax County Community Health Care Network (CHCN).
Greg White	COO and Vice President, Programs	Reston Interfaith, Inc.	Mr. White represents residents who receive housing, childcare, food, or financial assistance through Reston Interfaith.
Rod Williams	VP, Community Affairs	Inova Health System	Mr. Williams represents the underserved populations receiving support through Inova's programs that provide nutritional support, healthy habits education, and community based learning.
Dr. Tom Wilson	Executive Director	Northern Virginia Dental Clinic	Dr. Wilson represents vulnerable populations receiving dental care at the Northern Virginia Dental Clinic and at events such as Mission of Mercy that help underserved populations receive dental care.

4. Persons Representing the Broad Interests of the Community

Exhibit 74: Other Interviewees Representing the Broad Interests of the Community

Name	Title	Affiliation or Organization
Huey J. Battle	Regional Manager, Community Involvement	Washington Gas Chair, VA Workforce Council
Carl Biggs	Secretary	Inova Health Care Services Board
Marlene Blum	Chairwoman	Fairfax County Health Care Advisory Board
Sharon Bulova	Chairman	Fairfax County Board of Supervisors
Luanne Gutermuth	Vice President of Human Resources & Organization Development	Washington Gas
Rose Chu	Mason District Rep.	Fairfax County Health Care Advisory Board
Ellyn Crawford	Hunter Mill District Rep.	Fairfax County Health Care Advisory Board
Dr.Vera Dvorak	Medical Director for Case Management	Inova Health System
Jack Ebeler	Member	Inova Health Care Services Board
Dr. Loring Flint	Executive Vice President & Chief Medical Officer	Inova Health System
William H. Gary, Sr.	Vice President	Northern Virginia Community College
Kate Hanley	Member	Inova Health Care Services Board
Dr. J. Martin Lebowitz	At-Large	Fairfax County Health Care Advisory Board
Peggy Maddox	Health Administration & Policy Chair/Professor, College of Health & Human Services	George Mason University
Nicole Paulk	VP, Strategic Planning/Innovation	Inova Health System
Lori Morris	Vice Chair	Inova Health Care Services Board
Dr. John Moynihan	First Vice President	Inova Fairfax Medical Campus
Dr. Robin Remsburg	Professor and Director, School of Nursing	George Mason University
Rosanne Rodilosso	Dranesville District Rep.	Fairfax County Health Care Advisory Board
David West	Lee District Rep.	Fairfax County Health Care Advisory Board
Dr. Timothy Yarboro	At-Large	Fairfax County Health Care Advisory Board
Ann Zuvekas	Braddock District Rep.	Fairfax County Health Care Advisory Board

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