Community Health Needs Assessment

Prepared for
Inova Alexandria Hospital

By
Verité Healthcare Consulting, LLC

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ABOUT VERITÉ HEALTHCARE CONSULTING

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Alexandria, Virginia. The firm serves clients throughout the United States as a resource that helps health care providers conduct Community Health Needs Assessments and develop Implementation Strategies to address significant health needs. Verité has conducted more than 50 needs assessments for hospitals, health systems, and community partnerships nationally since 2010.

The firm also helps hospitals, hospital associations, and policy makers with community benefit reporting, program infrastructure, compliance, and community benefit-related 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 required to meet.

EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted by Inova Alexandria Hospital (Inova Alexandria Hospital or "the hospital") to identify significant community health needs and to inform development of an Implementation Strategy to address those needs. The hospital's assessment of community health needs also responds to regulatory requirements.

Inova Alexandria Hospital is a 318-bed community hospital that serves the City of Alexandria, Virginia, and parts of Fairfax and Arlington Counties. The hospital provides an array of medical and surgical services, including breast health, cancer services, cardiac surgery, childbirth services, emergency services, neuroscience services, orthopedics, rehabilitation services, surgical services, and others. Additional information on the hospital and its services is available at: http://www.inova.org/iah/.

The hospital is an operating unit of Inova Health System (Inova), which includes four other hospitals (Inova Fairfax Medical Campus, Inova Fair Oaks Hospital, Inova Loudoun Hospital, and Inova Mount Vernon Hospital) and that operates a number of other facilities and services across Northern Virginia. Additional information about Inova Health System is available at: http://www.inova.org/.

Federal regulations require that tax-exempt hospital facilities conduct a CHNA every three years and adopt an Implementation Strategy that addresses significant community health needs. Tax-exempt hospitals are also required to report information about the CHNA process and community benefits they provide on IRS Form 990, Schedule H.

As described in the instructions to 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 and programs also 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.

CHNAs seek to identify significant health needs 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?

[1]Instructions for IRS form 990 Schedule H, 2015.

- ***Where*** do these people live in the community?
- ***Why*** are these problems present?

The question of ***how*** the hospital can best address significant needs is the subject of a separate Implementation Strategy.

Methodology Summary

An Advisory Committee was established to help guide the hospital's CHNA process. This committee included the Health Directors from the City of Alexandria and from Fairfax, Loudoun, and Arlington Counties. Executive Directors from three Federally Qualified Health Centers (FQHCs) also provided input (Neighborhood Health, HealthWorks for Northern Virginia (HealthWorks), and Greater Prince William Community Health Center). Committee members also included representatives from Inova hospitals and the Inova Health System. Input was received from the committee regarding how the hospital's community was defined; data sources; interview candidates and protocols; the design and administration of a community survey, and interpretation of its results; and the process by which community health needs were determined to be significant.

Federal regulations that govern the CHNA process allow hospital facilities to define the "community a hospital serves" based on "all of the relevant facts and circumstances," including the "geographic location" served by the hospital facility, "target populations served" (e.g., children, women, or the aged), and/or the hospital facility's principal functions (e.g., focus on a particular specialty area or targeted disease)."[2] The community assessed by Inova Alexandria Hospital accounts for over 75 percent of the hospital's 2014 inpatient discharges and emergency department visits.

Secondary data from multiple sources were gathered and assessed. Statistics for numerous health status, health care access, and related indicators were analyzed, including comparisons to benchmarks where possible. Findings from recent assessments of the community's health needs conducted by other organizations were reviewed as well.

Input from 32 individuals was received through key informant interviews. These informants represented the broad interests of the community and included individuals with special knowledge of or expertise in public health.

A community survey was administered between November 1, 2015 and January 31, 2016. The survey was translated into eight languages. A total of 2,232 surveys from across Northern Virginia were received and assessed. Among those, 584 surveys were received from individuals living in the Inova Alexandria Hospital community.

Community health needs were determined to be "significant" if they were identified as problematic in two or more of the following three data sources: (1) the most recently available secondary data regarding the community's health, (2) recent assessments developed by other

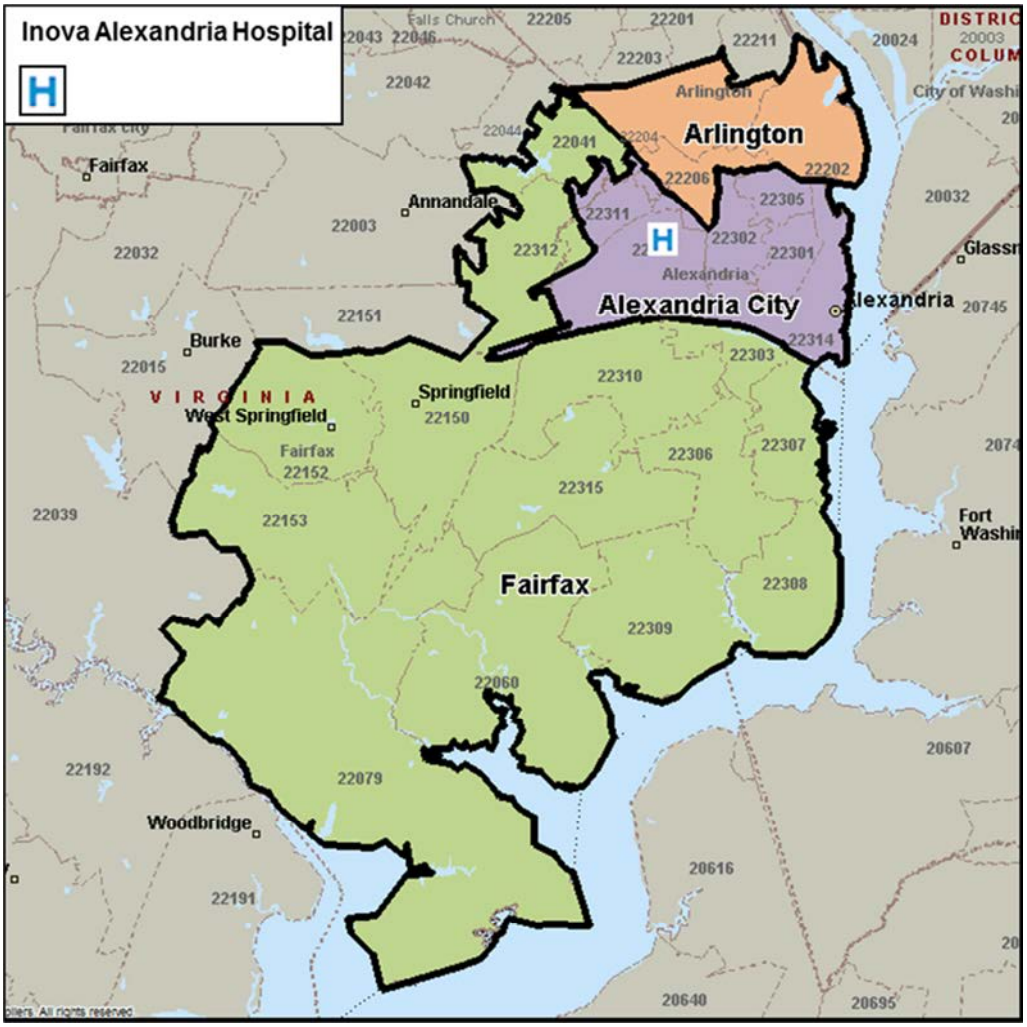
[2] 501(r) Final Rule, 2014.

organizations (e.g., local Health Departments), and (3) the key informants who participated in the interview process.

It is important to note that the survey utilized a convenience sampling methodology, and not a random sampling approach, such as one carried out by dialing randomly selected phone numbers. For this reason, findings from the survey are not generalizable to or representative of community-wide opinion. Given this, results from the community survey were not factored into the decision making process for identifying significant health needs, but have been included in this overall assessment because they may corroborate and supplement the other data sources, and may be helpful in identifying potential health disparities.

Community Served by the Hospital

The following map portrays the community served by Inova Alexandria Hospital.



Summary Characteristics

- Community comprised of Alexandria City and parts of Arlington County and Fairfax County (23 ZIP codes total)
- 75% of 2014 discharges originated in the community
  - 36% from Alexandria City
  - 4% from Arlington ZIP codes
  - 36% from Fairfax ZIP codes
- Total population in 2014: 584,950
- Projected population change between 2015 and 2020: 4.6%
  - 29.0% in the 65+ population
- Comparatively favorable health status and socioeconomics, but pockets of poverty and specific community health problems found to be present
- Eleven significant community health needs were identified through the CHNA

Significant Community Health Needs

Based on an assessment of secondary data (a broad range of health status and access to care indicators) and of primary data received through key stakeholder interviews, the following eleven issues have been identified as significant health needs in the community served by Inova Alexandria Hospital. The issues are presented below in alphabetical order, along with certain highlights regarding why each issue was identified as "significant."

Access to Basic Medical Care

- Federally-designated Medically Underserved Populations are present in the community served by Inova Alexandria Hospital (**Exhibit 35**).
- Access to care is a Healthy People 2020 goal, as it "is important for the achievement of health equity and for increasing the quality of a healthy life for everyone."
- A number of other, recent community health assessments have identified access to primary care as a significant need in the community, including the Alexandria CHIP, the Fairfax County CHIP, the CHNA prepared by Virginia Hospital Center, and the Virginia Health Equity Report.
- Consistent access to primary care was identified by virtually all interviewees as problematic. Interviewees indicated that segments of the population rely on emergency departments for primary care. Clinics that serve low-income members of the community report challenges in recruiting and retaining health professionals.
- To date, Virginia has been one of the states that has not expanded Medicaid, as originally contemplated by the Patient Protection and Affordable Care Act (ACA, 2010). The uninsurance rate would decline if Virginia reversed this policy decision.
- A lack of healthcare literacy was identified by many interviewees as contributing to access problems and to poor outcomes for those with chronic diseases. The issue relates to understanding health behaviors, how to manage chronic disease, and how to access and use health insurance and the health system fully.
- Virginia-wide BRFSS data indicate that Hispanics have the highest uninsurance rate and are least able to see a doctor due to cost. Financial barriers to accessing care are greatest for lower-income individuals.
- According to the Virginia Department of Health, the percent of mothers who received care in the first trimester in the City of Alexandria and in Fairfax County were less than Virginia as a whole, as well as below the Healthy People 2020 goal (**Exhibit 26**).

Access to Dental Care

- A number of other, recent community health assessments have identified access to dental care as a significant need in the community, including the Alexandria CHIP, the Virginia Hospital Center CHNA, and the Virginia Health Equity Report.
- Access to dental care was identified by a majority of interview participants as inadequate, particularly for those without insurance.

Adolescent Health

- The Alexandria CHIP identified adolescent health (including childhood obesity and mental health) as a significant need in the community, and Adolescent Health and Wellbeing is one of eight designated priority areas.
- Adolescents were mentioned frequently by interviewees as a group in need, given comparatively high teen pregnancy rates and recent data regarding mental health concerns.
- A number of data sources indicate that teen pregnancy (and birth) rates are comparatively high in Alexandria, including data from the Virginia Department of Health (**Exhibit 26**) and from County Health Rankings (**Exhibits 19** and **20**).
- Youth surveys conducted in Alexandria and Fairfax raise concerns about adolescent mental health and physical inactivity (**Exhibits 27** and **28**).

Conditions and Care of the Elderly

- The population in the Inova Alexandria Hospital community is projected to grow 4.6 percent between 2015 and 2020, but the number of persons 65 years of age and older is projected to increase 29 percent (**Exhibit 5**).
- A number of other recent community health assessments have identified conditions and care of the elderly as a significant need, including a March 2015 assessment prepared by the Alexandria Council of Human Services Organizations (ACHSO) and the Alexandria Community Health Improvement Plan.
- Aging well in the community was a top concern of many individuals who participated in the interview process.
- Interviewees identified the lack of senior living facilities and the decrease in physicians who accept Medicare as problematic.
- The health of older adults is a topic area focus in Healthy People 2020 goals. Objectives related to this goal include increased use of preventive services, increased providers with geriatric specialties and aging well in place.

Cultural Competency in Care

- U.S. Census data indicate that across the hospital's community, growth rates for Hispanic (or Latino) and Asian populations have been well above rates for Blacks/African Americans and Whites/Caucasians. In 2014, over 20 percent of people living in four community ZIP codes were not proficient in English (**Exhibit 11**).
- Poverty rates across the community (and within Virginia) are comparatively high for non-White populations (**Exhibit 14**).
- The incidence of certain communicable diseases, such as tuberculosis, is comparatively high in the community, possibly resulting from high levels of immigration (**Exhibit 25**).
- A number of other, recent community health assessments identified cultural competency in care as a significant need, including a March 2015 publication from ACHSO (which highlights inability to communicate information about available services to immigrant populations as an important barrier), the Fairfax CHIP, the Virginia Health Equity Report, and The State of the Health Care Workforce in Northern Virginia (March 2014).
- A majority of those interviewed indicated that immigrants, refugees, undocumented immigrants, and populations with language barriers face more difficulties in accessing care.

Diabetes

- In County Health Rankings, the City of Alexandria, Arlington County, and Fairfax County ranked within the bottom half of Virginia cities and counties for "diabetic screening rates" (**Exhibit 19**).
- In Alexandria, the age-adjusted mortality for diabetes exceeded the Virginia average (**Exhibit 22**). Admissions for uncontrolled diabetes also have been above average (**Exhibit 29**).
- Diabetes was mentioned by many interviewees as a concern associated with obesity and poor nutrition in the community.

HIV and other Sexually Transmitted Infections

- The CHSI data indicate that morbidity associated with HIV and syphilis is comparatively high in the community, and Alexandria ranks in the bottom quartile against peers (**Exhibit 21**).
- Both Alexandria and Arlington have had comparatively high incidence of HIV, syphilis, and tuberculosis (**Exhibit 25**).
- In Alexandria, sexually transmitted infections (STIs) and teen births compared unfavorably in County Health Rankings (**Exhibit 19**).
- HIV/AIDS Prevention and Care was selected as a priority area in the Alexandria Community Health Improvement Plan. It was also recently highlighted by the health department as the top issue in an analysis of all health issues considering both severity and burden together.
- The Alexandria Health Profile noted that rates of STIs in Alexandria are higher than the U.S. median for chlamydia, gonorrhea, syphilis, and HIV.

Hypertension

- In Alexandria, the age-adjusted mortality rate for primary hypertension and renal disease has been well above the Virginia average (**Exhibit 22**).
- Similarly, risk adjusted admission rates for hypertension (considered to be an ambulatory care sensitive condition, preventable if individuals access outpatient and/or prevention services) have been well above the Virginia average in Alexandria (**Exhibit 29**).
- Hypertension rates appear to be highest within Virginia's African American population (**Virginia BRFSS**). African American respondents to the community survey indicated that high blood pressure is one of the most important health issues in Northern Virginia.
- In response to a community survey question regarding whether a health professional ever has told the respondent that they have one or more health conditions, high blood pressure ranked third – after high cholesterol and "overweight or obese" (**Exhibit 40**).

Mental Health and Access to Mental Health Services

- Youth Risk Behavior Surveillance System (YRBSS) data for Alexandria indicate above average (and increasing) rates of "sad or hopeless feelings" and consideration of suicide (**Exhibit 27**). Similar data for Fairfax indicate more youth with "sad or hopeless feelings" than in Virginia as a whole (**Exhibit 29**).
- All other, recent assessments of the community's health have identified access to mental health services as a significant need in the community.

- Poor mental health in the community and a lack of access to mental health services were identified by a large majority of interviewees as problematic.
- In particular, interviewees noted that there is a lack of outpatient behavioral health care, especially for individuals with chronic, non-emergency needs (those who do not qualify for the Community Services Board).
- Along these lines, the Healthy People 2020 goal for mental health is to "improve mental health through prevention and by ensuring access to appropriate, quality mental health services."

Obesity and Obesity-Related Concerns

- Youth risk behavior data for Alexandria and Fairfax indicate that comparatively few youth are physically active (**Exhibits 27** and **28**).
- A number of other, recent community health assessments have identified childhood and adult obesity as significant needs, including the CHIP reports prepared by Alexandria and Fairfax.
- Across all interviews, the health behaviors of greatest concern were poor diet and nutrition and limited physical activity. Limited access to healthy foods (for many in lower socio-economic classes), insufficient knowledge about nutrition, and lack of open spaces and areas for walking and playing were cited as contributing factors. Diabetes, heart disease, and hypertension frequently were cited as associated concerns.
- The Healthy People 2020 goal related to nutrition and weight status is to "promote health and reduce chronic disease risk through the consumption of healthful diets and achievement and maintenance of healthy body weights."

Substance Abuse and Excessive Alcohol Use

- In County Health Rankings, the City of Alexandria, Arlington County, and Fairfax County ranked within the bottom half of Virginia cities and counties for "excessive drinking" (**Exhibit 19**).
- In Community Health Status Indicators (CHSI), Alexandria and Fairfax ranked within the bottom of peer counties for "adult binge drinking" (**Exhibit 21**).
- Binge drinking rates may be highest for those aged 18 to 24 years and most prevalent within White populations (**Virginia BRFSS**).
- A number of other, recent community health assessments have identified substance abuse and excessive alcohol use as significant needs, including the CHIP reports prepared by Alexandria and Fairfax, and the Northern Virginia Health Foundation report, *How Healthy is Northern Virginia.*
- Interviewees cited alcohol abuse and binge drinking as the most prevalent substance abuse issue. Concerns about opiate usage, misuse of prescription drugs, and synthetic marijuana were also present.
- Substance abuse is also a focus in Healthy People 2020.

The next sections of this CHNA report present the assessment of data on which these findings are based.

CHNA DATA AND ANALYSIS

METHODOLOGY

This section provides information on how the CHNA was conducted.

Data Sources

Community health needs were identified by collecting and analyzing data from multiple sources. Considering a vast array of information is important when assessing community health needs, to ensure the assessment captures a wide range of facts and perspectives and to increase confidence that significant community health needs have been identified accurately and objectively.

Statistics for numerous community health indicators were analyzed, including data provided by local, state, and federal government agencies, local community service organizations, and Inova Health System (Inova). Comparisons to benchmarks were made where possible. Fortunately, recent data regarding health needs for youth in Alexandria and Fairfax were available for review from surveys administered in public schools, much like YRBSS (the Youth Risk Behaviors Surveillance System, a survey administered nationally by the CDC). This CHNA also incorporated findings from other recently conducted, relevant community health assessments.

Input from 32 persons representing the broad interests of the community was taken into account through key informant interviews. Interviewees included: individuals with special knowledge of or expertise in public health; local public health departments; agencies with current data or information about the health and social needs of the community; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

A community survey was administered between November 1, 2015 and January 31, 2016. In total, 2,232 surveys were received from communities served by all Inova hospitals, and 584 surveys were received from residents of the Inova Alexandria Hospital community. The survey was available online (in eight languages: English, Amharic, Arabic, Farsi, Korean, Spanish, Vietnamese, and Urdu) and also in paper-based formats. The survey consisted of 22 questions about a range of health status and access issues and regarding respondent demographic characteristics (see Appendix A).

Paper copies of the survey were distributed to various local organizations. Efforts were made to reach vulnerable populations such as racial and ethnic minorities, low-income groups, and non-English speakers. The survey was publicized via social media and interactions with human services organizations, Health Departments, and other methods.

It is important to note that the survey utilized a convenience sampling methodology, and not a random sampling approach, such as one carried out by dialing randomly selected phone numbers. For this reason, findings from the survey are not generalizable to or representative of community-wide opinion. Given this, results from the community survey were not factored into the decision making process for significant health needs, but have been included in the overall assessment because they may corroborate and supplement the other data sources, and may be helpful in identifying potential health disparities.

Surveys submitted or entered between mid-November 18, 2015 and February 2, 2016 are included in this analysis.

Collaboration

The hospital collaborated with an Advisory Committee, which was established to help guide the CHNA process. This committee included the Health Directors from the City of Alexandria and from Fairfax, Loudoun, and Arlington Counties. Executive Directors from three Federally Qualified Health Centers (FQHCs) also provided input (Neighborhood Health, HealthWorks, and Greater Prince William Community Health Center). Committee members also included representatives from Inova hospitals and Inova Health System. Input was received from the committee regarding how the hospital's community was defined; data sources; interview candidates and protocols; the design and administration of a community survey, and interpretation of its results; and the process by which community health needs were determined to be significant.

Prioritization Process

Community health needs were determined to be "significant" if they were identified as problematic in two or more of the following three data sources: (1) the most recently available secondary data regarding the community's health, (2) recent assessments developed by other organizations (e.g., local Health Departments), and (3) the key informants who participated in the interview process.

Information Gaps

This CHNA relies on multiple data sources and community input gathered between August 2015 and February 2016. A number of data limitations should be recognized when interpreting results. For example, some data (e.g., County Health Rankings, Community Health Status Indicators, Behavioral Risk Factors Surveillance System, and others) exist only at a county-wide level of detail. These data sources do not allow assessing health needs at a more granular level of detail, such as by ZIP code or census tract. The hospital's community includes a subset of Arlington and Fairfax County ZIP codes, so relying on county-wide data for those areas is imprecise.

Secondary data upon which this assessment relies measure community health in prior years. For example, the most recently available mortality data published by the Virginia Department of Health are from 2013. Others sources incorporate data from 2010. The impacts of recent public policy developments, changes in the economy, and other community developments are not yet reflected in those data sets.

The community survey developed and administered for this CHNA was not administered to a random sample of community residents. Accordingly, its results are not generalizable to or representative of community-wide opinion.

The findings of this CHNA may differ from those of others conducted in the community. Differences in data sources, communities assessed (e.g., hospital service areas versus counties or cities), and prioritization processes contribute to differences in findings.

DEFINITION OF COMMUNITY ASSESSED

This section identifies the community that was assessed by Inova Alexandria Hospital. The community was defined by considering the geographic origins of the hospital's 2014 inpatient discharges and emergency department visits.

Inova Alexandria Hospital's community is comprised of 23 ZIP codes, including all of Alexandria City along with parts of Fairfax and Arlington counties (**Exhibit 1**).

Exhibit 1: Inova Alexandria Hospital Inpatient Discharges and Emergency Department Visits by City or County, 2014

City or County	Percent of Discharges	Percent of Emergency Department Visits
Alexandria City	35.8%	33.0%
Arlington County ZIP Codes	3.7%	3.3%
Fairfax County ZIP Codes	35.6%	41.1%
Community Total	**75.2%**	**77.4%**
Other Areas	24.8%	22.6%
All Areas	100.0%	100.0%
Note: Total Discharges and ED Visits	**16,096**	**97,960**

Source: Inova Health System, 2015.

In 2014, the 23 ZIP codes that comprise the hospital's community accounted for over 75 percent of its discharges and emergency department visits.

The total population of this community in 2014 was approximately 585,000 persons (**Exhibit 2**).

Exhibit 2: Community Population, 2014

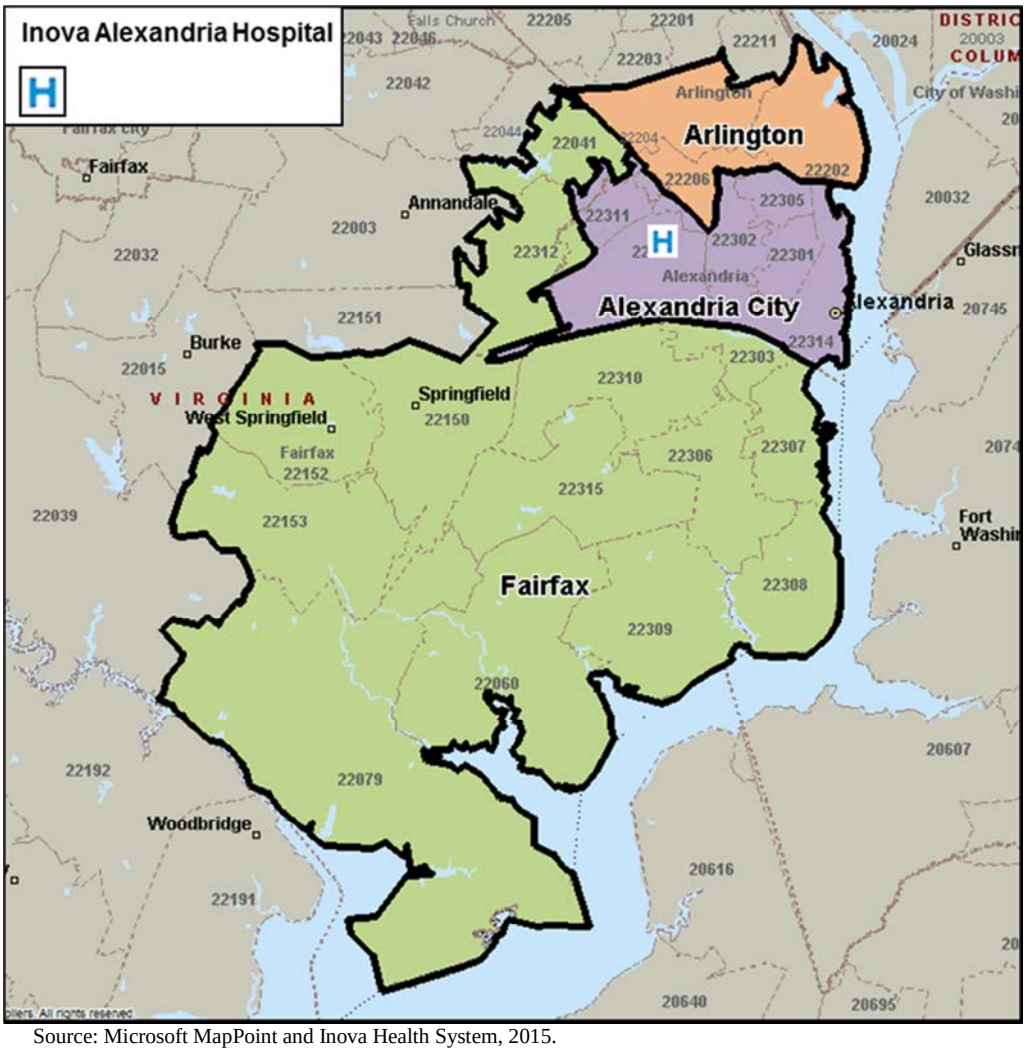
Subregions	2014 Population	Percent of 2014 Population
Alexandria City Subregions	**143,893**	**24.6%**
Alexandria/Old Town	83,627	14.3%
West Alexandria	60,266	10.3%
Arlington County Subregions	**93,407**	**16.0%**
Shirlington/South Arlington	93,407	16.0%
Fairfax County Subregions	**347,650**	**59.4%**
Franconia/Kingstowne	55,610	9.5%
Lincolnia/Bailey's Crossroads	58,772	10.0%
Mount Vernon North	25,846	4.4%
Lorton/Newington	31,186	5.3%
Mount Vrn South / Ft. Belvoir	85,797	14.7%
Springfield	90,439	15.5%
Community Total	**584,950**	**100.0%**

Source: Metropolitan Washington Council of Governments, 2015.

The hospital is located in West Alexandria (ZIP code 22304).

The map in **Exhibit 3** portrays the ZIP codes and jurisdictions that comprise the Inova Alexandria Hospital community.

Exhibit 3: Inova Alexandria Hospital Community



Source: Microsoft MapPoint and Inova Health System, 2015.

SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding health needs in the Inova Alexandria Hospital community.

Demographics

Population characteristics and changes directly influence community health needs. The total population in the Inova Alexandria Hospital community is expected to grow 4.6 percent from 2015 to 2020 (**Exhibit 4**).

Exhibit 4: Percent Change in Community Population by Subregion

Subregions	Total Population			Percent Change	
	2010	2015	2020	2010-2015	2015-2020
Alexandria City Subregions	**137,099**	**145,748**	**155,505**	**6.3%**	**6.7%**
Alexandria/Old Town	76,651	85,527	90,458	11.6%	5.8%
West Alexandria	60,448	60,221	65,047	-0.4%	8.0%
Arlington County Subregions	**88,462**	**94,687**	**101,653**	**7.0%**	**7.4%**
Shirlington/South Arlington	88,462	94,687	101,653	7.0%	7.4%
Fairfax County Subregions	**338,687**	**349,953**	**360,680**	**3.3%**	**3.1%**
Franconia/Kingstowne	54,208	55,969	57,238	3.2%	2.3%
Lincolnia/Bailey's Crossroads	58,419	58,860	59,867	0.8%	1.7%
Mount Vernon North	24,973	26,069	27,357	4.4%	4.9%
Lorton/Newington	30,286	31,415	32,726	3.7%	4.2%
Mount Vrn South / Ft. Belvoir	82,852	86,554	88,542	4.5%	2.3%
Springfield	87,949	91,086	94,950	3.6%	4.2%
Community Total	**564,248**	**590,388**	**617,837**	**4.6%**	**4.6%**

Source: Metropolitan Washington Council of Governments, 2015.

Every subregion in the community is projected to experience population growth from 2015 to 2020. Populations in West Alexandria, Alexandria/Old Town, Shirlington/South Arlington, and Mount Vernon North are expected to grow the fastest.

Exhibit 5 shows the community's population by age and sex from 2010 through 2015, with projections to 2020.

Exhibit 5: Percent Change in Population by Age/Sex Cohort, 2015-2020

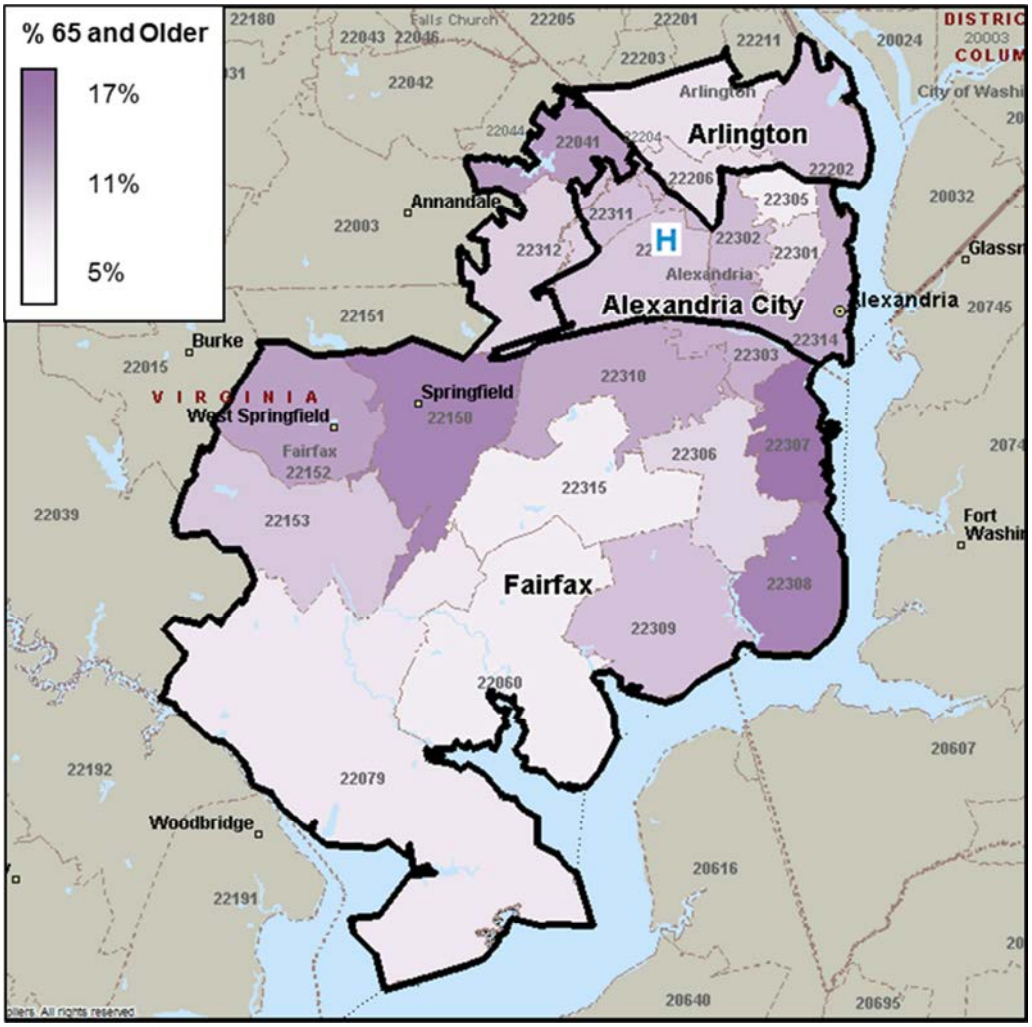
	Community Population			% Change in Population	
Age/Sex Cohort	2010	2015	2020	2010-2015	2015-2020
0-17	119,416	128,023	136,729	7.2%	6.8%
Female 18-44	124,254	119,755	113,223	-3.6%	-5.5%
Male 18-44	120,237	117,406	111,782	-2.4%	-4.8%
45-54	83,181	86,005	89,766	3.4%	4.4%
55-64	63,376	71,547	79,066	12.9%	10.5%
65+	53,784	67,651	87,272	25.8%	29.0%
Total	**564,248**	**590,388**	**617,837**	**4.6%**	**4.6%**

Source: Metropolitan Washington Council of Governments and Claritas, 2015.

The number of persons aged 65 years and older is projected to increase by 29 percent between 2015 and 2020. The population 55 to 64 years of age is projected to increase by almost 11 percent. The growth of older populations is likely to lead to a growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

Exhibit 6 illustrates the percent of the population 65 years of age and older in the community by ZIP code.

Exhibit 6: Percent of Population Aged 65+ by ZIP Code, 2014



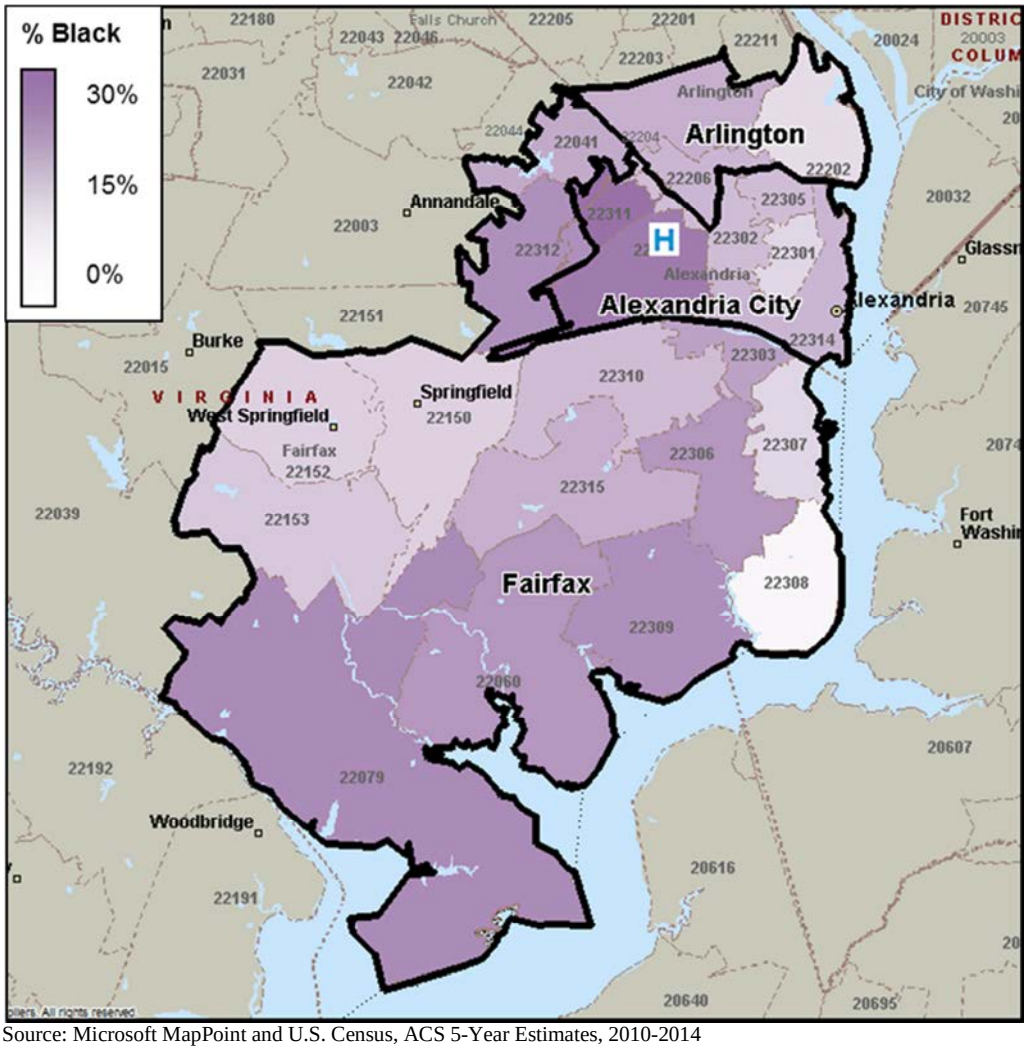
Source: Microsoft MapPoint and U.S. Census, ACS 5-Year Estimates, 2010-2014

Certain Fairfax County ZIP codes had the highest proportions of populations aged 65 and over (22307/Alexandria, 22308/Fort Hunt, 22150/Springfield, and 22041/Falls Church). ZIP code 22305 in Alexandria had the lowest proportion.

According to Fairfax County, between 2000 and 2010 all of the net population growth in the county was from ethnic and racial minorities. U.S. Census data indicate that the percent of the population White/Caucasian (excluding Hispanics and Latinos) declined between 2010 and 2014 across Northern Virginia, and that across the Inova Alexandria Hospital community growth rates for Hispanic (or Latino) and Asian populations have been well above rates for Blacks/African Americans and Whites/Caucasians.

Exhibits 7 through 11 show locations in the community where the percentages of the population that are Black, Hispanic (or Latino), Asian, Foreign-Born, and "not proficient in English" were highest in 2014.

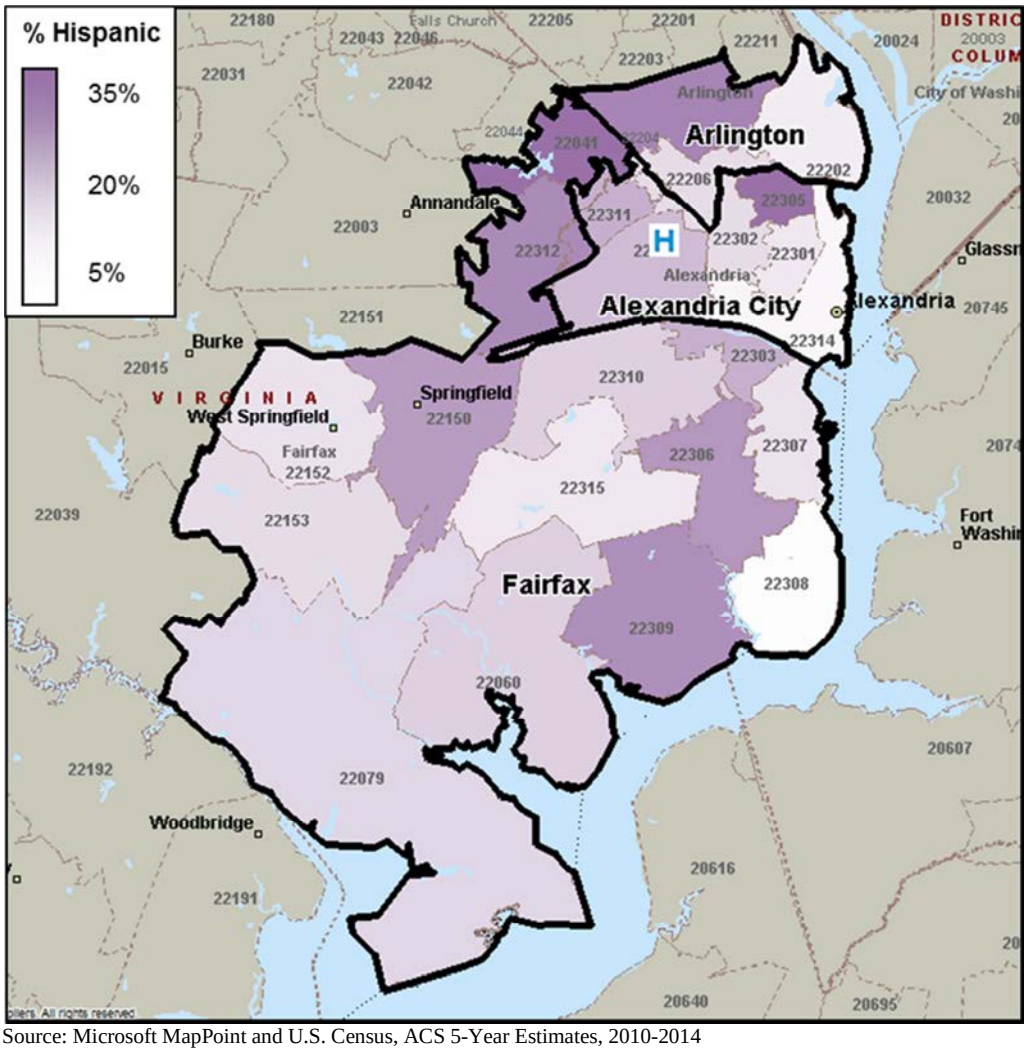
Exhibit 7: Percent of Population - Black, 2014



Source: Microsoft MapPoint and U.S. Census, ACS 5-Year Estimates, 2010-2014

The highest percentages were in southern areas of Fairfax County and in West Alexandria.

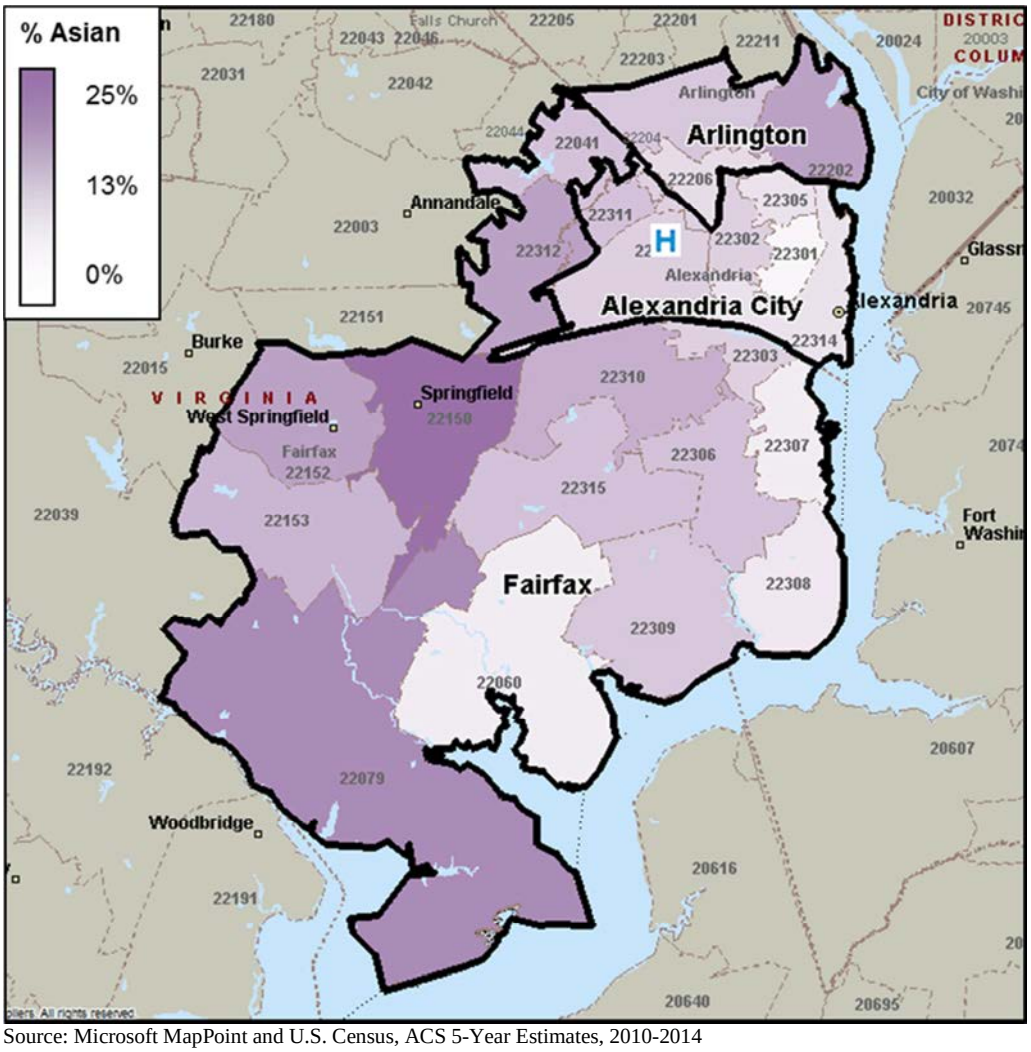
Exhibit 8: Percent of Population - Hispanic (or Latino), 2014



Source: Microsoft MapPoint and U.S. Census, ACS 5-Year Estimates, 2010-2014

The highest percentages were in the Bailey's Crossroads area and in Arlington (ZIP codes 22041, 22312 and 22204) and in ZIP code 22305 (Alexandria). According to the U.S. Census, the percent of the population Hispanic (or Latino) in the City of Alexandria increased from 16.1 percent to 16.6 percent between 2010 and 2014. In Fairfax County, this percentage increased from 15.6 percent to 16.4 during the same time period.

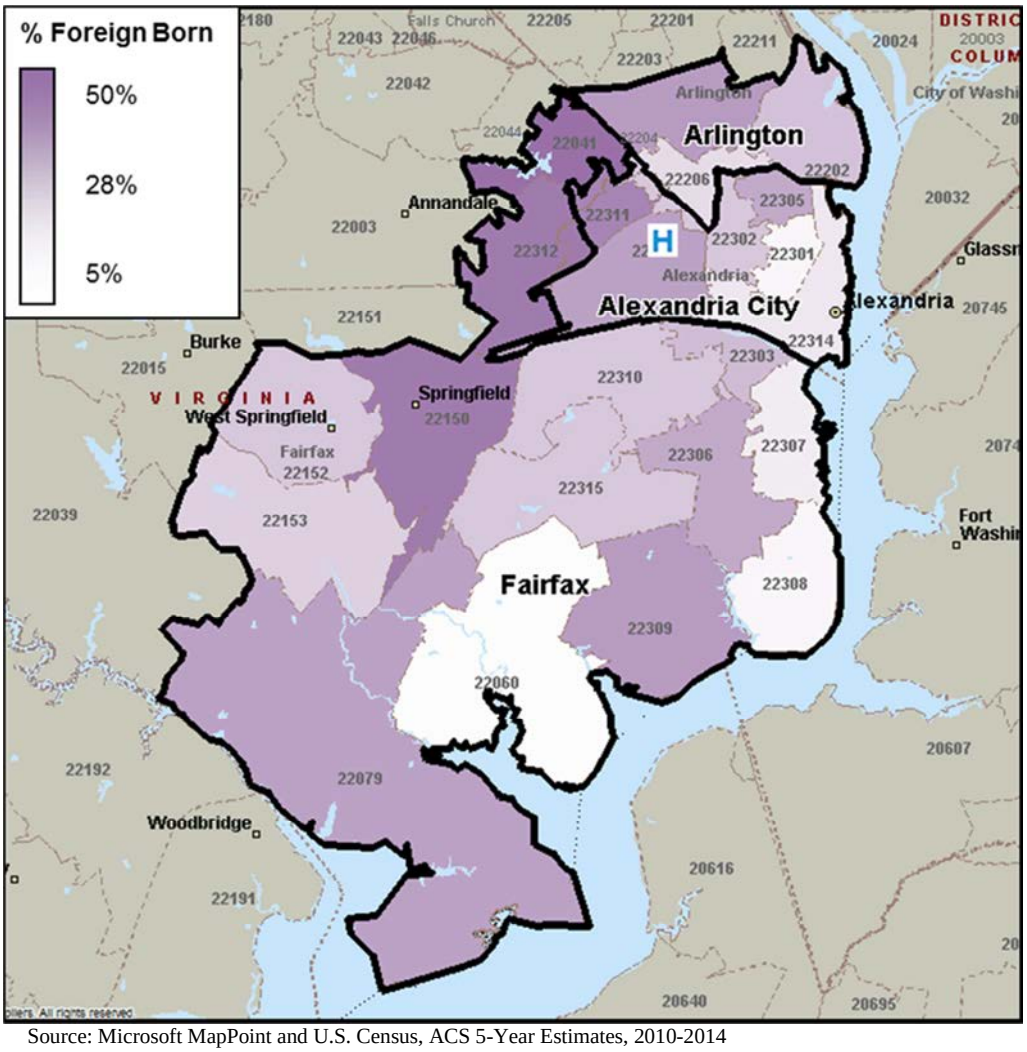
Exhibit 9: Percent of Population - Asian, 2014



Source: Microsoft MapPoint and U.S. Census, ACS 5-Year Estimates, 2010-2014

The highest percentages were in Fairfax County (ZIP codes 22150 and 22079). According to the U.S. Census, the percent of the population that is Asian in the City of Alexandria increased from 6.0 percent to 6.9 percent between 2010 and 2014. In Fairfax County, this percentage increased from 17.5 percent to 19.2 percent during the same time period.

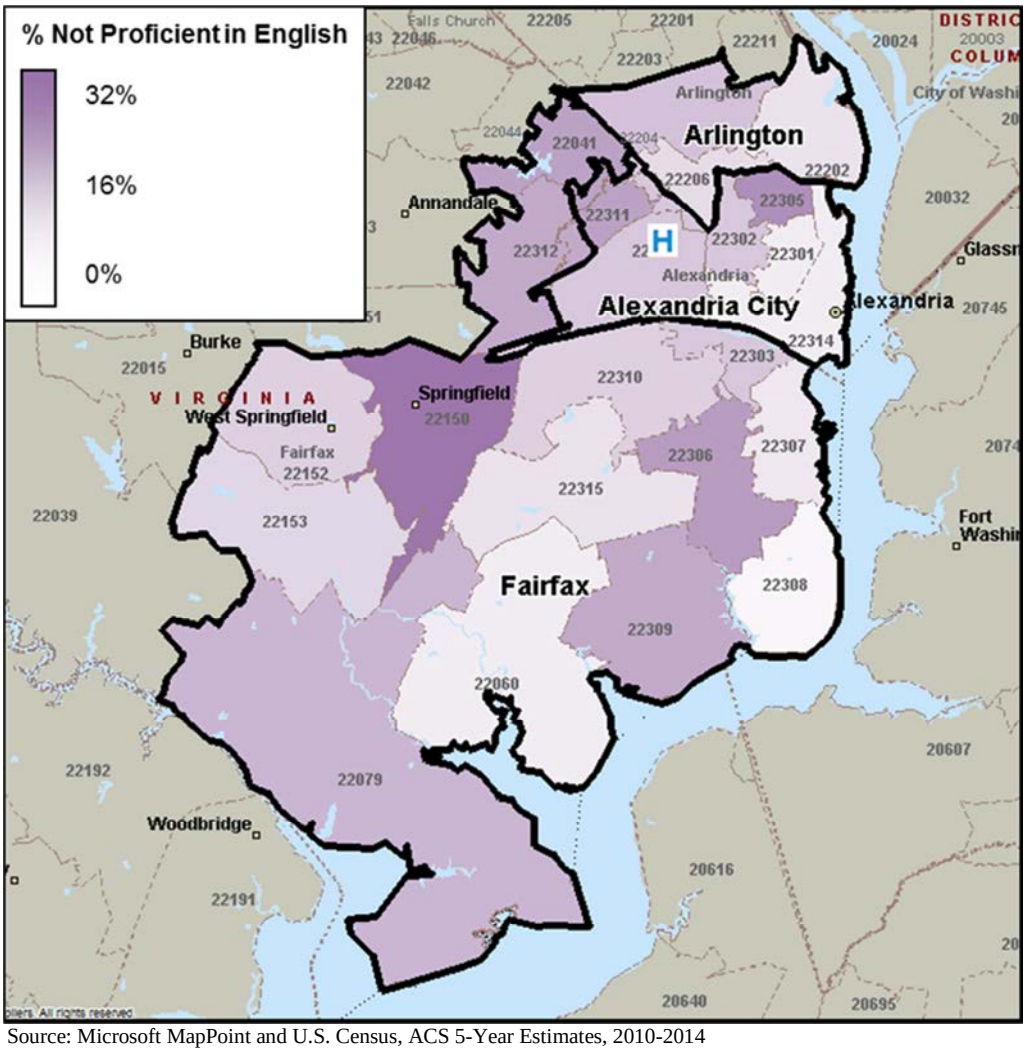
Exhibit 10: Percent of Population – Foreign-Born, 2014



Source: Microsoft MapPoint and U.S. Census, ACS 5-Year Estimates, 2010-2014

In ZIP codes 22041, 22312, and 22150, the percent of the population foreign-born exceeded 44 percent in 2014.

Exhibit 11: Percent of Population - Not Proficient in English, 2014



Source: Microsoft MapPoint and U.S. Census, ACS 5-Year Estimates, 2010-2014

In 2014, over 30 percent of the residents of ZIP code 22150 were not proficient in English. Over 20 percent of those in ZIP codes 22305, 22306, and 22311 shared this characteristic.

Data regarding residents without a high school diploma, with a disability, and linguistically isolated are presented in **Exhibit 12** by city and county, for Virginia and the United States.

Exhibit 12: Other Socioeconomic Indicators, 2014

Measure	Alexandria City	Arlington County	Fairfax County	Virginia	U.S.
Population 25+ without High School Diploma	8.7%	6.6%	8.1%	12.1%	13.7%
Population with a Disability	6.1%	5.2%	6.4%	11.0%	12.3%
Population Linguistically Isolated	11.4%	7.8%	14.5%	5.6%	8.6%

Source: U.S. Census, ACS 5-Year Estimates, 2010-2014

Exhibit 12 indicates that:

- Alexandria, Fairfax and Arlington have lower percentages of residents aged 25 years and older without a high school diploma than Virginia and United States averages.
- These areas had a lower percentage of the population with a disability, at about half the Virginia and United States averages.
- Compared to Virginia and national averages, these areas had a higher proportion of the population that is linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak English less than "very well."

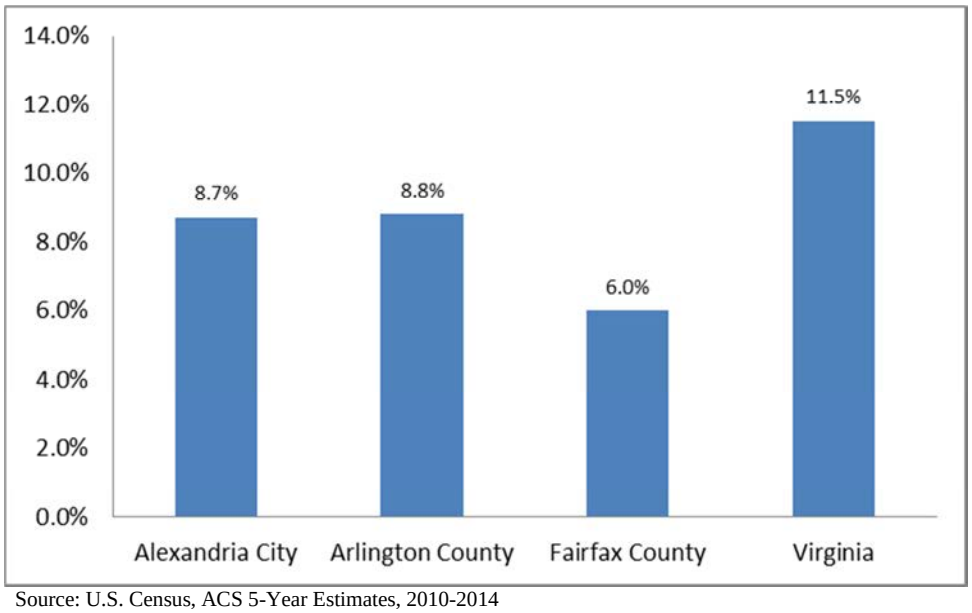
Economic indicators

The following categories of economic indicators with implications for health were assessed: (1) people in poverty; (2) unemployment rate; (3) insurance status; and (4) crime.

People in Poverty

Many health needs have been associated with poverty. According to the U.S. Census, in 2014 approximately 11.5 percent of people in Virginia were living in poverty. The City of Alexandria, Fairfax County, and Arlington County reported overall poverty rates well below the Virginia average (**Exhibit 13**).

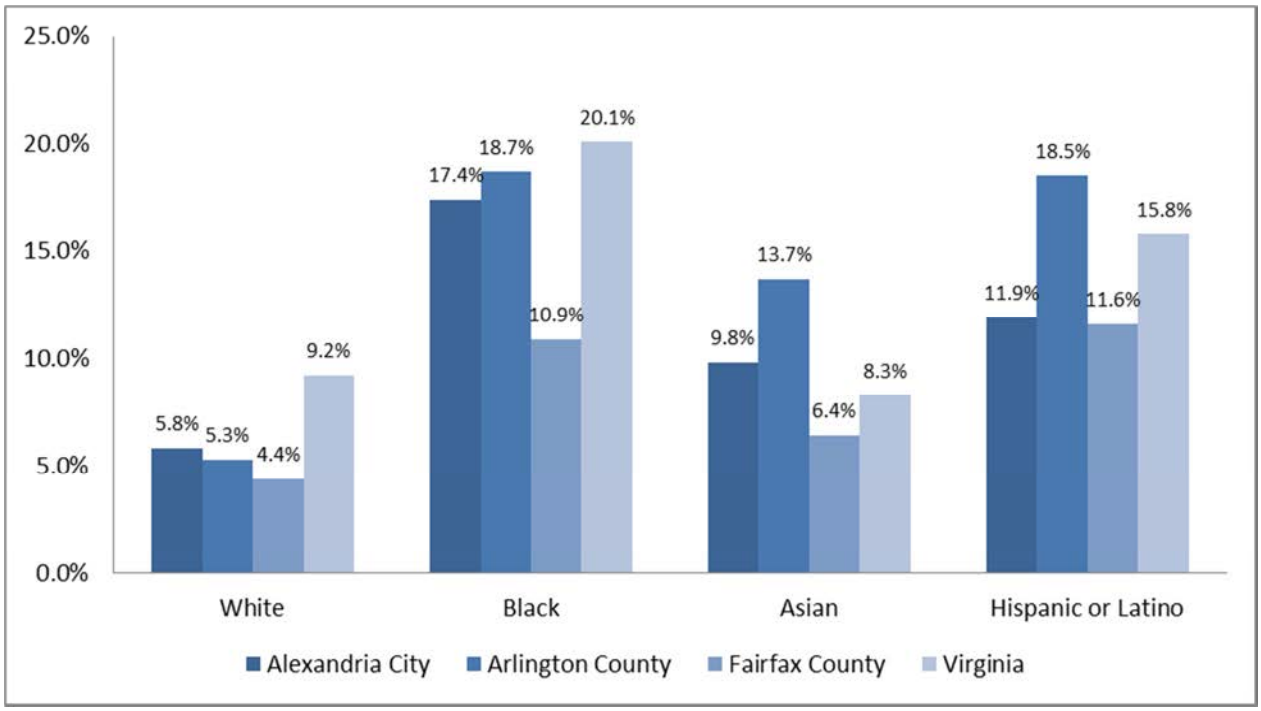
Exhibit 13: **Percent of People in Poverty, 2014**



Source: U.S. Census, ACS 5-Year Estimates, 2010-2014

While poverty rates in the community served by the hospital appear lower than the Commonwealth-wide average, considerable variation in poverty rates is present across racial and ethnic categories (**Exhibit 14**).

Exhibit 14: Poverty Rates by Race and Ethnicity, 2014

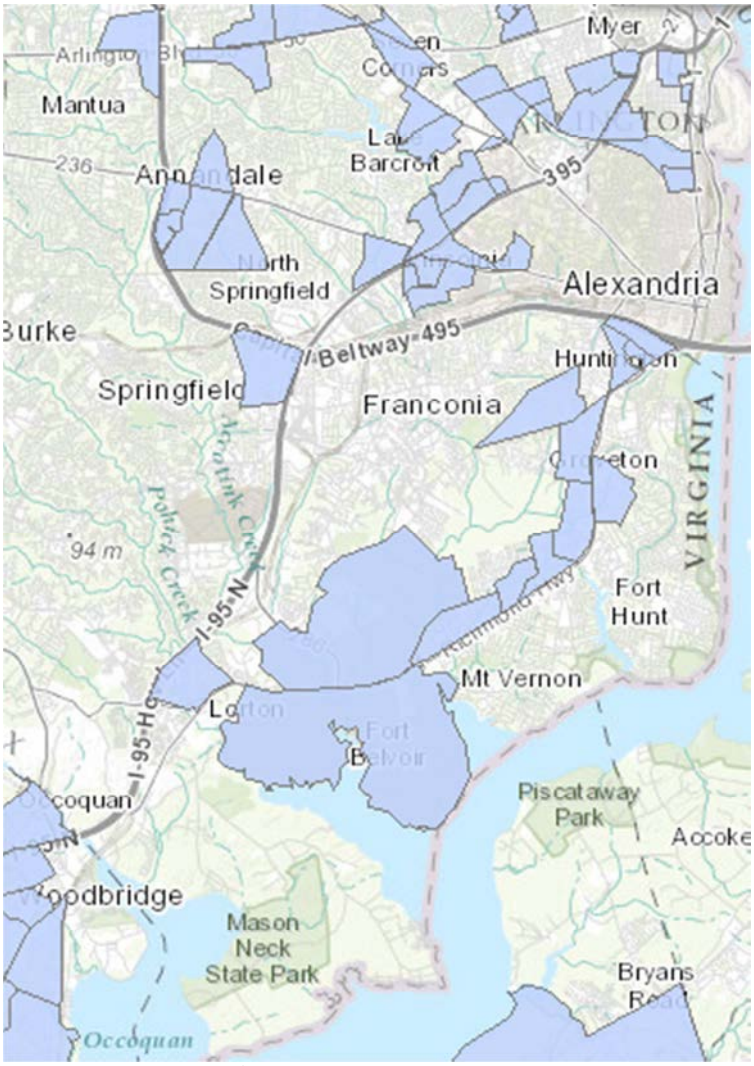


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014

Poverty rates across the community have been comparatively high for African Americans, Hispanic (or Latino), and Asian residents. The poverty rates for Asian and Hispanic (or Latino) residents of Arlington County exceeded the Virginia averages.

Exhibit 15 portrays (in blue shading) the low income census tracts in this community. The U.S. Department of Agriculture defines "low income census tracts" as areas where poverty rates are 20 percent or higher or where median family incomes are 80 percent or lower than within the metropolitan area.

Exhibit 15: Low Income Census Tracts



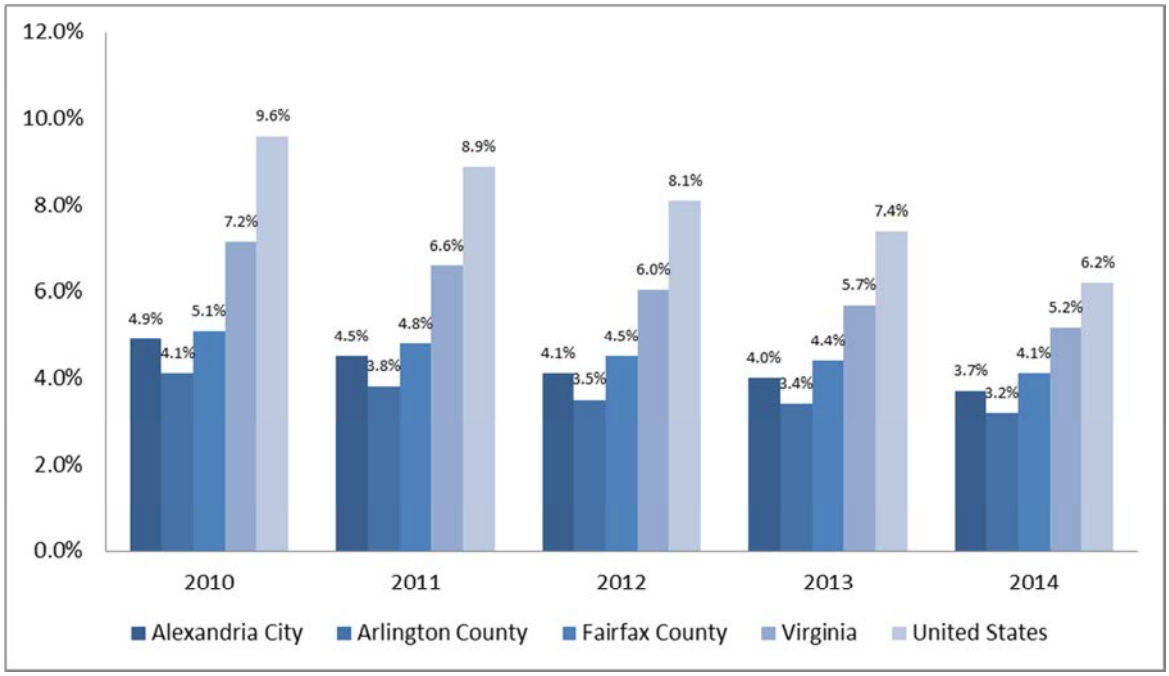
Source: US Department of Agriculture Economic Research Service, ESRI, 2016.

Low income census tracts have been prevalent in areas of West Alexandria and in Fairfax County along the Richmond Highway corridor.

Unemployment

Unemployment is problematic because many receive health insurance coverage through their (or a family member's) employer. If unemployment rises, access to employer based health insurance can decrease. **Exhibit 16** shows unemployment rates for 2010 through 2014 for the City of Alexandria, Fairfax County, and Arlington County, with Virginia and national rates for comparison.

Exhibit 16: Unemployment Rates, 2010-2014



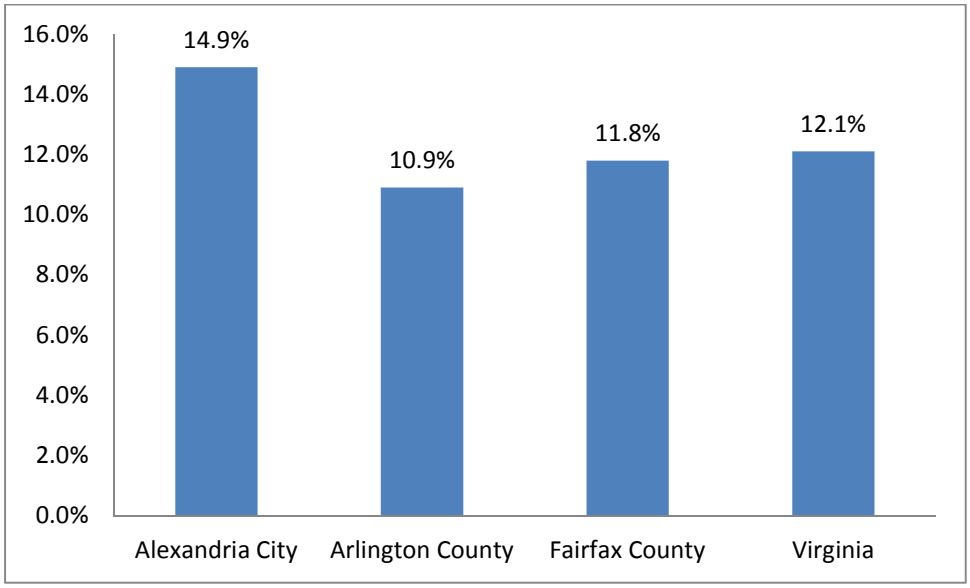
Source: Bureau of Labor Statistics, 2010-2014.

Unemployment rates fell significantly between 2010 and 2014. While unemployment rates in the areas served by the hospital have been well below Virginia and national averages, the decrease in these areas from 2010-2014 has been comparatively slower.

Insurance Status

Exhibit 17 presents the estimated percent of the population in the City of Alexandria, Arlington County, Fairfax County, and the Commonwealth of Virginia without health insurance (uninsured).

Exhibit 17: Percent of the Population without Health Insurance, 2014



Source: U.S. Census, ACS 5-Year Estimates, 2010-2014

At 14.9 percent, Alexandria exceeded the Commonwealth-wide average.

Virginia Medicaid Expansion

The uninsurance rate would be lower if Virginia had expanded eligibility for Medicaid as originally contemplated by the Patient Protection and Affordable Care Act (ACA, 2010). Subsequent to the ACA's passage, a June 2012 Supreme Court ruling provided states with discretion regarding whether or not to expand Medicaid eligibility. To date, Virginia has been one of the states that has not expanded Medicaid. As a result, Medicaid eligibility in Virginia has remained very limited.

In Virginia, Medicaid is primarily available to children in low-income families, pregnant women, low-income elderly persons, individuals with disabilities, and parents who meet specific income thresholds.[3] Adults without children or disabilities are ineligible.

It has been estimated that over 400,000 Virginians could gain coverage if Medicaid were expanded. Across the United States, uninsurance rates have fallen most in states that decided to expand Medicaid.[4]

[3] DMAS.
[4] See: http://hrms.urban.org/briefs/Increase-in-Medicaid-under-the-ACA-reduces-uninsurance.html

Crime

Exhibit 18 provides certain crime statistics for the areas served by Inova Alexandria Hospital. Cells are shaded if the statistic is worse than Virginia averages. Darker shading indicates the statistic is more than 25 percent worse than the Virginia average.

Exhibit 18: Crime Rates by Type and County, Per 100,000, 2014

Crime	Alexandria City	Arlington County	Fairfax County	Virginia
Violent Crime	188.5	142.2	85.8	199.6
Murder/Non-negligent manslaughter	2.7	0.5	0.9	4.1
Rape	15.0	16.8	13.4	28.2
Robbery	97.0	50.4	35.8	52.4
Aggravated assault	73.8	74.5	35.6	114.8
Property Crime	2,021.6	1,601.5	1,298.9	1,963.6
Burglary	176.9	92.7	82.4	282.5
Larceny-theft	1,665.1	1,444.3	1,150.0	1,587.4
Motor vehicle theft	179.6	64.5	66.6	93.6

Source: FBI, 2014.

2014 crime rates in Arlington and Fairfax counties were below the Commonwealth average. Rates were above average in Alexandria for robbery, property crime, larceny-theft, and motor vehicle theft.

Local Health Status and Access Indicators

This section assesses health status and access indicators for the Inova Alexandria Hospital community. Data sources include: (1) County Health Rankings, (2) the Centers for Disease Control and Prevention's (CDC) Community Health Status Indicators, (3) the Virginia Department of Health, (4) the CDC's Behavioral Risk Factor Surveillance System, and (5) Youth Risk Behavior Surveillance System data gathered by the CDC and officials from Alexandria and Fairfax.

Throughout this section, data and cells are highlighted if indicators are unfavorable – because they exceed benchmarks (typically, Virginia averages). Where confidence interval data are available, cells are highlighted only if variances are unfavorable and also statistically significant.

County Health Rankings

County Health Rankings, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation, incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several

variables grouped into the following categories: health behaviors, clinical care,[5] social and economic factors, and physical environment.[6] *County Health Rankings* is updated annually. *County Health Rankings 2016* relies on data from 2006 to 2015, with most data from 2010 to 2013.

Exhibit 19 presents 2013 and 2016 rankings for each available indicator category. Rankings indicate how the county (or city) ranked in relation to all 134 counties (or cities) in the Commonwealth, with 1 indicating the most favorable ranking and 134 the least favorable. The table also indicates if rankings fell between 2013 and 2016. For some indicators, for example "Excessive drinking," values are available for fewer than 134 counties (or cities). For that indicator, only 97 comparison jurisdictions were available for the 2013 County Health Ranking.

Indicators in the exhibit are shaded based on the jurisdiction's percentile for the state ranking (light shading indicates the jurisdiction is in the bottom 50th percentile and dark shading indicated the jurisdiction is in the bottom 25th percentile). For example, the City of Alexandria compared unfavorably to other counties in Virginia for the percentage of Medicare eligible individuals receiving diabetic screening. Alexandria's rank of 123 out of 134 counties placed it in the bottom 25th percentile in the 2016 rankings.

Exhibit 19: County Health Rankings, 2013 and 2016

	Alexandria City			Arlington County			Fairfax County		
	2013	2016	Rank Change	2013	2016	Rank Change	2013	2016	Rank Change
Health Outcomes	**8**	**10**	↓	**3**	**3**		**1**	**2**	↓
Length of Life	**9**	**8**		**3**	**2**		**2**	**3**	↓
Quality of Life	**11**	**24**	↓	**6**	**3**		**3**	**2**	
Health Factors	**12**	**12**		**3**	**2**		**4**	**3**	
Health Behaviors	**2**	**5**	↓	**1**	**2**	↓	**5**	**1**	
Adult smoking*	11	5		12	4		16	1	
Adult obesity	2	3	↓	1	1		4	2	
Excessive drinking**	94	100	↓	90	133	↓	95	88	
STIs	82	81		37	51	↓	19	24	↓
Teen births	93	84		22	19		12	13	↓
Clinical Care	**52**	**64**	↓	**17**	**11**		**15**	**13**	
Primary care physicians	37	43	↓	39	35		26	19	
Dentists	4	31	↓	47	45		13	20	↓
Mental health providers	10	16	↓	21	44	↓	23	34	↓
Preventable hospital stays	29	45	↓	5	3		7	7	
Diabetic screening	124	123		119	98		107	97	
Social & Economic Factors	**23**	**16**		**5**	**3**		**2**	**5**	↓
Some college	5	4		1	1		8	6	
Unemployment	4	3		1	1		3	7	↓
Injury deaths	-	7		-	1		-	5	
Physical Environment	**30**	**8**		**18**	**1**		**46**	**28**	
Air pollution	56	60	↓	56	60	↓	69	66	
Severe housing problems	-	79		-	72		-	81	

*2013 Data Ranked out of 98 Counties with Data Available

**2013 Data Ranked out of 97 Counties with Data Available

and ratio of population to primary care physicians, and Quality of Care, which 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.

[6]A composite measure that examines Environmental Quality, which measures the number of air pollution-particulate matter days and air pollution-ozone days, and Built Environment, which measures access to healthy foods and recreational facilities and the percent of restaurants that are fast food.

Source: County Health Rankings, 2016.

Overall Alexandria, Arlington, and Fairfax compared favorably in most indicator categories to the other cities and counties in Virginia. Exceptions include excessive drinking, diabetic screening rates (for Medicare eligible individuals), and severe housing problems. In Alexandria, sexually transmitted infections (STIs) and teen births compared unfavorably. Rankings fell for each area between 2013 and 2016 for the supply of mental health providers.

Exhibit 20 provides data for each underlying indicator of the composite categories in the County Health Rankings.[7] The exhibit also includes national averages. Cells in the exhibit are shaded if the indicator for the city or county exceeded the Virginia average at all for that indicator, and are shaded darker if the value is 25% worse than Virginia.

[7] County Health Rankings provides details about what each indicator measures, how it is defined, and data sources at http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures_datasources_years.pdf

Exhibit 20: County Health Rankings Data Compared to Virginia and U.S. Average, 2016

Indicator Category	Data	Alexandria City	Arlington County	Fairfax County	Virginia	U.S.
Health Outcomes						
Length of Life	Years of potential life lost before age 75 per 100,000 population	4,328.9	3,368.4	3,402.1	6,147.1	7,700.0
Quality of Life	Percent of adults reporting fair or poor health	13.0	11.3	10.3	14.2	16.0
	Average number of physically unhealthy days reported in past 30 days	3.0	2.8	2.6	3.2	3.7
	Average number of mentally unhealthy days reported in past 30 days	2.9	2.8	2.5	3.1	3.7
	Percent of live births with low birthweight (<2500 grams)	7.5	6.7	7.1	8.2	8.0
Health Factors						
Health Behaviors						
Adult Smoking	Percent of adults that report smoking >= 100 cigarettes and currently smoking	14.1	13.4	12.3	16.9	18.0
Adult Obesity	Percent of adults that report a BMI >= 30	20.7	16.9	19.9	27.3	31.0
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	8.7	9.2	9.6	8.3	7.2
Physical Inactivity	Percent of adults aged 20 and over reporting no leisure-time physical activity	15.8	13.6	15.4	22.2	28.0
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	100.0	100.0	100.0	80.7	62.0
Alcohol Impaired Driving Deaths	Percent of driving deaths with alcohol involvement	16.7	19.2	26.0	31.2	30.0
Excessive Drinking	Binge plus heavy drinking	17.2	21.4	16.6	16.8	17.0
STDs	Chlamydia rate per 100,000 population	371.9	264.2	182.3	407.0	287.7
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	38.1	18.0	13.1	27.5	40.0
Clinical Care						
Uninsured	Percent of population under age 65 without health insurance	14.4	10.5	12.3	14.0	17.0
Primary Care Physicians	Ratio of population to primary care physicians	1504:1	1363:1	973:1	1329:1	1990:1
Dentists	Ratio of population to dentists	1333:1	1745:1	1033:1	1570:1	2590:1
Mental Health Providers	Ratio of population to mental health providers	368:1	761:1	650:1	685:1	1060:1
Preventable Hospital Stays	Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	45.9	28.5	32.9	49.1	60.0
Diabetic Screening	Percent of diabetic Medicare enrollees that receive HbA1c monitoring	82.3	85.6	85.6	86.6	85.0
Mammography Screening	Percent of female Medicare enrollees, ages 67-69, that receive mammography screening	60.0	61.0	61.0	63.0	61.0

Source: County Health Rankings, 2016.

Exhibit 20: County Health Rankings Data Compared to Virginia and U.S. Average, 2015 (continued)

Indicator Category	Data	Alexandria City	Arlington County	Fairfax County	Virginia	U.S.
Social & Economic Factors						
High School Graduation	Percent of ninth-grade cohort that graduates in four years	77.0	84.0	86.0	84.6	86.0
Some College	Percent of adults aged 25-44 years with some post-secondary education	81.8	88.3	79.9	68.8	56.0
Unemployment	Percent of population age 16+ unemployed but seeking work	3.7	3.2	4.1	5.2	6.0
Children in poverty	Percent of children under age 18 in poverty	15.8	11.0	8.7	15.9	23.0
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.2	4.0	3.8	4.8	4.4
Children in single-parent households	Percent of children that live in a household headed by single parent	32.8	22.2	19.2	30.0	32.0
Social Associations	Number of associations per 10,000 population	23.4	13.7	8.2	11.3	13.0
Violent Crime	Number of reported violent crime offenses per 100,000 population	180.4	150.3	90.0	200.2	199.0
Injury Deaths	Injury mortality per 100,000	32.1	25.5	30.0	52.0	74.0
Physical Environment						
Air Pollution	The average daily measure of fine particulate matter in micrograms per cubic meter (PM2.5) in a county	12.7	12.7	12.7	12.7	11.9
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	14.5	14.0	14.7	15.4	14.0
Drive Alone to Work	Percent of the workforce that drives alone to work	58.7	53.9	72.1	77.5	80.0
Long Commute- Drive Alone	Among workers who commute in their car alone, the percent that commute more than 30 minutes	45.8	42.9	49.6	38.2	29.0

Source: County Health Rankings, 2015.

Exhibit 20 highlights the following comparatively unfavorable indicators:

- Binge plus heavy drinking,
- Teen birth rate in Alexandria,
- Percent uninsured in Alexandria,
- Primary care physicians rate (Alexandria and Arlington),
- Dentists rate in Arlington,
- Mental health providers rate in Arlington,
- Percent of diabetic Medicare enrollees that receive HbA1c monitoring,
- Percent of female Medicare enrollees that receive mammography screening,
- High school graduation rates (Alexandria and Arlington),
- Percent of children living in a household headed by a single parent (Alexandria),
- Social associations rate in Fairfax,
- Daily air pollution, and
- Percent of workers who commute in their car alone that commute more than 30 minutes.

Community Health Status Indicators

The Centers for Disease Control and Prevention's *Community Health Status Indicators* provide health profiles for all 3,143 counties in the United States. Counties are assessed using 44 metrics associated with health outcomes including health care access and quality, health behaviors, social factors, and the physical environment.

The *Community Health Status Indicators* allow comparisons between a given county to other "peer counties." Peer counties are assigned based on 19 variables including population size, population growth, population density, household income, unemployment, percent children, percent elderly and poverty rates.

Exhibit 21 compares Alexandria, Arlington, and Fairfax to their respective peer counties and cities and highlights community health issues found to rank in the bottom quartile of the jurisdictions included in the analysis.

Exhibit 21: Community Health Status Indicators, 2015

Category	Indicator	Alexandria City	Arlington County	Fairfax County
Mortality	Alzheimer's Disease Deaths			
	Cancer Deaths			
	Chronic Kidney Disease Deaths			
	Chronic Lower Respiratory Disease (CLRD) Deaths			
	Coronary Heart Disease Deaths			
	Diabetes Deaths			
	Female Life Expectancy			
	Male Life Expectancy			
	Motor Vehicle Deaths			
	Stroke Deaths			
	Unintentional Injury (including motor vehicle)			
Morbidity	Adult Diabetes			
	Adult Obesity			
	Adult Overall Health Status			
	Alzheimer's Disease/Dementia			
	Cancer			
	Gonorrhea			
	HIV			
	Older Adult Asthma			
	Older Adult Depression			
	Preterm Births			
	Syphilis			
Health Care Access and Quality	Cost Barrier to Care			
	Older Adult Preventable Hospitalizations			
	Primary Care Provider Access			
	Uninsured			
Health Behaviors	Adult Binge Drinking			
	Adult Female Routine Pap Tests			
	Adult Physical Inactivity			
	Adult Smoking			
	Teen Births			
Social Factors	Children in Single-Parent Households			
	High Housing Costs			
	Inadequate Social Support			
	On Time High School Graduation			
	Poverty			
	Unemployment			
	Violent Crime			
Physical Environment	Access to Parks			
	Annual Average PM2.5 Concentration			
	Drinking Water Violations			
	Housing Stress			
	Limited Access to Healthy Food			
	Living Near Highways			

Source: Community Health Status Indicators, 2015.

The CHSI data indicate that morbidity associated with HIV and Syphilis is comparatively high in the community, as is adult binge drinking. Indicators for on-time high school graduation and the number of people living near highways also benchmark unfavorably.

Virginia Department of Health

The Virginia Department of Health maintains a data warehouse that includes city or county-level indicators regarding mortality (**Exhibits 22** and **23**), cancer incidence (**Exhibit 24**), communicable diseases (**Exhibit 25**), and maternal and child health (**Exhibit 26**). Cells are shaded if the statistic is at all worse than Virginia averages, but does not indicate a statistically significant difference.

Exhibit 22 provides age-adjusted mortality rates for selected causes of death in 2013.

Exhibit 22: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2013

Age Adjusted Mortality Rates	Alexandria City	Arlington County	Fairfax County	Virginia
Total Deaths	586.0	558.2	492.9	**720.1**
Cancer	134.0	137.4	117.4	**161.3**
Heart Disease	132.0	98.4	102.2	**155.9**
Cerebrovascular Diseases (Stroke)	29.8	35.4	26.0	**38.5**
Chronic Lower Respiratory Diseases	23.8	18.2	19.9	**37.2**
Unintentional Injury	21.1	18.4	20.6	**33.0**
Alzheimer's Disease	12.6	16.5	12.4	**19.6**
Diabetes	19.4	10.9	10.8	**18.3**
Nephritis and Nephrosis	12.5	12.4	11.6	**18.0**
Septicemia	16.8	13.8	12.0	**17.7**
Influenza and Pneumonia	11.6	21.6	12.5	**16.8**
Suicide	8.6	7.9	10.0	**12.2**
Chronic Liver Disease	6.2	8.3	4.2	**8.9**
Primary Hypertension and Renal Disease	12.1	5.2	6.2	**7.2**

Source: Virginia Department of Health, 2013.

With few exceptions (influenza and pneumonia in Arlington County, and diabetes and primary hypertension and renal disease in Alexandria), age-adjusted mortality rates in the community have been below Virginia averages.

Exhibit 23: Cancer Deaths, Age-Adjusted Rates per 100,000 Population, 2008-2012

Mortality Rate	Alexandria City	Arlington County	Fairfax County	Virginia
All Cancers	123.3	126.2	131.7	**171.2**
Breast	23.5	19.6	20.3	**22.7**
Cervical	2.0	0.8	1.4	**1.9**
Colorectal	10.2	10.3	11.5	**14.9**
Lung and Bronchus	24.5	24.7	28.0	**48.2**
Melanoma	2.8	1.7	2.6	**2.9**
Oral Cavity	2.2	1.7	1.2	**2.3**
Ovarian	6.5	9.6	7.7	**7.9**
Prostate	22.7	16.6	16.9	**22.4**

Source: Virginia Department of Health, 2012.

Similarly, cancer mortality rates have generally been below Virginia averages on an age-adjusted basis.

Exhibit 24 presents age-adjusted cancer incidence rates in the community.

Exhibit 24: Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2008-2012

Incidence Rate	Alexandria City	Arlington County	Fairfax County	Virginia
All Cancers	317.6	369.7	381.8	**429.1**
Breast	111.3	143.7	125.9	**124.6**
Prostate	114.3	99.0	109.1	**126.3**
Lung and Bronchus	33.2	37.2	41.0	**63.6**
Colorectal	27.4	31.3	33.2	**38.3**
Melanoma	11.7	14.1	13.2	**18.3**
Ovarian	7.9	12.1	13.3	**11.8**
Pancreas	5.8	11.6	10.1	**10.4**
Cervical	4.6	3.4	5.9	**6.3**

Source: National Cancer Institute and Centers for Disease Control, 2012.

The incidence rates of breast and pancreatic cancer in Arlington and ovarian cancer in Fairfax were more than ten percent higher than the Virginia averages in the 2008 through 2012 time period.

Exhibit 25: Communicable Disease Incidence per 100,000 Population, 2014

Diagnoses	Alexandria City	Arlington County	Fairfax County	Virginia
HIV	23.2	24.9	15.0	**13.4**
Chlamydia	427.9	335.7	210.6	**438.0**
Gonorrhea	82.0	59.7	27.0	**100.8**
Early Syphilis	10.9	10.9	3.6	**6.8**
E. coli	0.7	0.9	1.1	**1.2**
Lyme Disease	8.2	11.8	19.6	**14.1**
Salmonellosis	10.3	8.6	11.8	**12.7**
Tuberculosis	9.6	3.6	4.8	**2.2**

Source: Virginia Department of Health, 2014.

Both Alexandria and Arlington have had comparatively high incidence of HIV, syphilis, and tuberculosis. Tuberculosis incidence also benchmarks unfavorably in Fairfax County, as does the incidence of Lyme disease.

Exhibit 26: Maternal and Child Health Indicators, 2013

Measure	Alexandria City	Arlington County	Fairfax County	Virginia
Birth Rate (per 1,000 population)	18.3	14.2	13.1	**12.3**
Teen Pregnancy Rate (age 10-19)	24.8	6.3	6.1	**14.4**
< 15 years	1.6	0.5	0.2	**0.3**
15-17 years	18.7	4.0	5.9	**11.3**
18-19 years	99.6	25.9	22.9	**50.4**
Low Weight Births (%)	7.3	6.7	7.2	**8.0**
First Trimester Care (%)	70.3	64.8	80.3	**82.9**
Non-Marital Births (%)	23.0	16.0	21.1	**34.6**
Infant Mortality Rate	4.8	4.4	4.0	**6.2**

Source: Virginia Department of Health, 2013.

Exhibit 26 indicates that teen pregnancy rates have been problematic in Alexandria. The data also indicate that in 2013, under 80 percent of women in Alexandria and Arlington initiated prenatal care during the first trimester of pregnancy.

Behavioral Risk Factor Surveillance System

The Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) gathers data through a telephone survey regarding health risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire United States. Analysis of BRFSS data can identify local health issues, trends and health disparities, and can enable county, state, or nation-wide comparisons.

BRFSS data were assessed for Alexandria, Arlington, and Fairfax and compared with Virginia averages. Only one indicator was found to be unfavorable on a statistically significant basis: binge drinking in Arlington and Fairfax counties.

In addition to asking questions about respondent health, the BRFSS gathers certain demographic data such as respondent age, education level achieved, household income, gender, and race/ethnicity. Unfortunately, BRFSS data available for Alexandria, Arlington, and Fairfax are based on sample sizes too small to analyze local responses by demographic cohort. BRFSS data for these demographic cohorts are available for the entire Commonwealth, and those data show the following:

- Results by age range:
    - According to the Virginia BRFSS data, uninsurance rates tend to fall as individuals age. Rates are lowest for Medicare-eligible individuals (65 years of age and older).
    - The prevalence of chronic disease tends to increase as individuals age.
    - Across age groups, 14 to 20 percent of Virginians have been told they have some form of depression. Rates overall average 16 percent, and are highest for those between 44 and 65 years of age.
    - Smoking is most prevalent for those aged 25 to 34 years. Inability to see a doctor due to cost is also most prevalent within this group.
    - Binge drinking rates are highest for those aged 18 to 24 years and appear to decline with age.
- Results by level of educational achievement: uninsurance rates, chronic disease prevalence, smoking rates, depression rates, and the percentage of respondents unable to see a doctor due to cost are highest within cohorts with the lowest levels of educational achievement (those without high school diplomas and with no post-high school education).
- Results by level of household income:
    - Not surprisingly, households with the lowest incomes also have the highest rates of uninsurance, chronic disease, depression, smoking, and problems seeing a doctor due to cost.
    - Binge drinking rates are highest in households with the highest incomes.
- Results by gender: compared to males, females report higher levels of disability (e.g., difficulty walking or climbing stairs), higher cancer rates, and higher rates of depression. Males report slightly higher rates of angina or coronary heart disease than females.

- Results by race/ethnicity:
    - BRFSS data indicate that Hispanics have the highest uninsurance rate and are least able to see a doctor due to cost.
    - Disabilities appear to be most prevalent within Virginia's Black populations (e.g., difficulties with activities of daily living). Black individuals also appear to have the highest rates of smoking, high blood pressure, asthma, and diabetes.
    - Binge drinking appears to be most prevalent within White populations.

Youth Risk Behavior Data (Alexandria and Fairfax)

The City of Alexandria and Fairfax County both surveyed youth in public schools. The surveys asked questions similar to those raised by the CDC's Youth Risk Behavior Surveillance System (YRBSS).

Exhibit 27 presents data for Alexandria, with comparisons to Virginia and the U.S. Cells are shaded if the value is at all worse than Virginia averages, with darker shading indicating the value is more than 25% worse than Virginia.

Exhibit 27: Alexandria YRBS Data

Measure	Alexandria City	Virginia	United States
Rode with a driver who had been drinking alcohol	17.8%	17.8%	21.9%
Texted or e-mailed while driving a car or other vehicle	28.7%	34.6%	41.4%
Carried a weapon	10.6%	15.8%	17.9%
Were in a physical fight	14.6%	23.5%	24.7%
Were electronically bullied	9.8%	14.5%	14.8%
Were bullied on school property	13.2%	21.9%	19.6%
Felt sad or hopeless	30.0%	25.7%	29.9%
Seriously considered attempting suicide	15.5%	14.7%	17.0%
Made a plan about how they would attempt suicide	11.5%	15.2%	13.6%
Attempted suicide	6.0%	9.8%	8.0%
Currently smoked cigarettes	9.0%	11.1%	15.7%
Did not try to quit smoking cigarettes	65.9%	55.2%	52.0%
Currently drank alcohol	25.7%	27.3%	34.9%
Ever used marijuana	34.2%	32.1%	40.7%
Ever had sexual intercourse	36.1%	-	46.8%
Were currently sexually active	25.8%	-	34.0%
Did not use a condom	41.8%	-	40.9%
Drank alcohol or used drugs before last sexual intercourse	18.3%	-	22.4%
Were physically active at least 60 minutes per day on 5 or more days	31.2%	44.3%	47.3%
Played video or computer games or used a computer 3 or more hours per day	45.8%	38.0%	41.3%
Watched television 3 or more hours per day	27.3%	28.2%	32.5%

Source: Alexandria Health Department, 2015.

The data indicate that compared to Virginia and U.S. averages, Alexandria youth experience more challenges with mental health issues and are less physically active.

The Alexandria survey was conducted in 2014, with results reported in 2015. A similar survey also was conducted in 2011, allowing certain trends to be identified. The data indicate that between 2011 and 2014, mental health concerns increased (in grades 8, 10 and 12); alcohol, cigarette, and marijuana use (except for 8th graders) appeared to decrease.

Exhibit 28 presents data for Fairfax, also with comparisons to Virginia and the U.S.

Exhibit 28: Fairfax YRBS Data

Measure	Overall		
	Fairfax	Virginia	U.S.
Bullying			
Prevalence of Having Been Cyberbullied in the Past Year	15.8%	14.5%	14.8%
Drug/Alcohol Use			
Lifetime Prevalence of Alcohol Use	41.1%	55.3%	66.2%
Lifetime Prevalence of Marijuana Use	21.0%	32.1%	40.7%
Lifetime Prevalence of Smoking Cigarettes	17.5%	35.5%	41.1%
Past Month Prevalence of Alcohol Use	19.3%	27.3%	34.9%
Past Month Prevalence of Smoking Cigarettes	5.3%	11.1%	15.7%
Percentage of Students Reporting First Use of Alcohol Before Age 13	12.3%	18.2%	18.6%
Percentage of Students Reporting First Use of Cigarettes Before Age 13	5.9%	7.9%	9.3%
Percentage of Students Reporting First Use of Marijuana Before Age 13	2.2%	7.5%	8.6%
Physical and Mental Health			
Percentage of Students Who Felt Sad or Hopeless in the Past Year	29.6%	25.7%	29.9%
Prevalence of Drinking Soda or Pop At Least One Time Per Day in the Past Week	13.0%	21.7%	27.0%
Prevalence of Physical Activity on Five or More Days in the Past Week	39.9%	44.3%	47.3%

Source: Fairfax County, 2015.

Similar to Alexandria, the data indicate a higher prevalence of depression and lower rates of physical activity compared to Virginia averages.

Additional Fairfax data indicate that depression and physical inactivity rates are higher for 12th grade students than for 8th and 10th graders. These issues also are more prevalent within racial and ethnic minorities (Black/African American, Asian, and Hispanic students). Female students in Fairfax County are much more likely than male students to report feeling so sad or hopeless (for two or more weeks in a row in the past year) that they stopped doing some usual activities.

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSCs, frequently referred to as Prevention Quality Indicators or PQIs) throughout the community.

ACSCs are eighteen health "conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more

severe disease."[8] As such, rates of hospitalization for these conditions can "provide insight into the quality of the health care system outside of the hospital," including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes. In Exhibits 29 and 30, cells are shaded if the value is at all worse than Virginia averages, with darker shading indicating the value is more than 25% worse than Virginia.

Exhibit 29 provides risk adjusted, 2012 PQI rates (per 100,000 persons) for Alexandria, Arlington, and Fairfax – with comparisons to Virginia averages.

Exhibit 29: PQI (ACSC) Risk Adjusted Rates per 100,000, 2012

Prevention Quality Indicators Risk Adjusted Rate per 100,000 Population	Alexandria City	Arlington County	Fairfax County	Virginia
Chronic Obstructive Pulmonary Disease or Asthma in Older Adults	409.3	168.5	173.2	**406.8**
Heart failure admission rate	253.2	106.7	159.0	**322.2**
Percutaneous coronary angioplasty rate	116.9	107.6	116.1	**274.3**
Laminectomy rate	124.6	120.1	167.3	**239.0**
Bacterial pneumonia admission rate	187.6	107.4	118.1	**227.2**
Urinary tract infection admission rate	214.0	87.1	124.5	**159.6**
Hysterectomy rate	76.3	66.8	63.8	**127.2**
Dehydration admission rate	120.9	60.1	61.1	**112.2**
Coronary artery bypass graft rate	74.8	54.1	70.1	**108.0**
Diabetes long-term complication admission rate	81.7	41.3	41.9	**100.6**
Diabetes short-term complication admission rate	38.6	32.0	26.5	**74.1**
Hypertension admission rate	70.8	13.3	22.7	**50.9**
Asthma in Younger Adults	19.8	9.2	16.8	**44.3**
Rate of lower-extremity amputation among patients with diabetes	11.8	7.8	5.6	**16.3**
Uncontrolled diabetes admission rate	16.1	2.7	4.0	**12.6**
Angina without procedure admission rate	4.2	1.5	2.8	**8.3**
Low birth weight rate	5.2	5.5	5.7	**6.5**

Source: Virginia Department of Health, 2013.

The rate of admissions for ACSC generally is highest in Alexandria, with admissions rates for COPD or asthma, urinary tract infections, dehydration, hypertension, and uncontrolled diabetes exceeding Virginia averages.

Exhibit 30 provides 2014 PQI data for Alexandria, Arlington, and other areas in Northern Virginia. An additional analysis of PQI rates for the twenty lowest-income ZIP codes across the

[8]Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

community served by Inova is also provided. Cells are highlighted if rates are above the average for Northern Virginia, with dark shading if rates are 50 percent or more above average.

Exhibit 30: Unadjusted PQI (ACSC) Rates per 100,000, 2014

Condition	Alexandria City	Arlington County	Fairfax County	Loudoun County	Prince William County	Northern Virginia	Low Income ZIP Codes
COPD in Older Adults	312.5	166.2	187.2	185.6	274.9	208.7	288.2
Heart Failure	203.1	95.1	178.3	167.9	197.0	173.0	206.9
Bacterial Pneumonia	117.7	64.7	103.3	120.4	103.7	102.6	108.6
Urinary Tract Infection	148.4	67.4	108.6	107.8	103.1	105.9	119.8
Dehydration	72.1	34.2	49.8	61.5	52.2	51.7	56.8
Long-term Diabetes Complications	70.5	36.9	49.4	57.7	70.1	54.5	69.4
Short-term Diabetes Complications	57.2	30.4	37.6	38.3	60.0	42.4	61.6
Hypertension	44.8	10.9	30.0	16.4	23.5	25.9	39.9
Perforated Appendix	24.9	11.4	19.8	17.3	16.6	18.3	22.1
Asthma in Younger Adults	20.3	11.2	18.0	18.6	29.2	19.4	22.0
Lower-Extremity Amputation due to Diabetes	9.1	2.7	6.8	4.6	6.8	6.2	8.8
Uncontrolled Diabetes	9.9	3.3	2.8	2.5	4.9	3.7	5.3
Angina	4.1	0.5	3.3	2.5	4.2	3.1	2.8

Source: Analysis of 2014 discharge data using AHRQ software, 2016.

In **Exhibit 30**, Alexandria's PQI rates are above average for every condition and are particularly high for COPD, hypertension, and uncontrolled diabetes. Arlington County's PQI rates are below the Northern Virginia average. Rates are higher for each condition except Angina within the lowest-income ZIP codes.

Exhibit 31 provides the number of PQI cases for each Inova hospital.

Exhibit 31: PQI Cases by Inova Hospital, 2014

Condition	Inova Alexandria Hospital	Inova Fairfax Hospital	Inova Fair Oaks Hospital	Inova Loudoun Hospital	Inova Mount Vernon Hospital
COPD in Older Adults	403	370	182	209	185
Heart Failure	457	785	246	317	266
Bacterial Pneumonia	260	376	175	234	118
Urinary Tract Infection	337	387	199	203	120
Dehydration	178	149	88	115	72
Long-term Diabetes Complications	182	258	87	88	48
Short-term Diabetes Complications	127	114	74	77	58
Hypertension	143	95	36	35	60
Perforated Appendix	40	90	41	28	16
Asthma in Younger Adults	25	18	9	9	10
Lower-Extremity Amputation due to Diabetes	15	39	11	6	1
Uncontrolled Diabetes	17	17	3	5	3
Angina	11	9	7	5	6
Low Birth Weight	185	492	138	93	-
PQI Discharges	2,380	3,199	1,296	1,424	963
Total Discharges	19,356	50,880	16,524	13,811	8,626
PQI / Total Discharges	12.3%	6.3%	7.8%	10.3%	11.2%

Source: Analysis of 2014 discharge data using AHRQ software, 2016.

About 12 percent of Inova Alexandria Hospital's discharges are for PQI conditions – the highest proportion within Inova. These cases represent 11 percent of discharges for Inova Mount Vernon Hospital, 10 percent for Inova Loudoun Hospital, 8 percent for Inova Fair Oaks Hospital, and 6 percent for Inova Fairfax Medical Campus.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index

Dignity Health, a California-based hospital system, developed and has made widely available for public use a *Community Need Index*™ that measures barriers to health care access by county/city and ZIP code. The index is based on five social and economic indicators:

- The percentage of elders, 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 a high school diploma;
- The percentage of uninsured and unemployed residents; and
- The percentage of the population renting houses.

The *Community Need Index*™ calculates a score for each ZIP code based on these indicators. Scores range from "Lowest Need" (1.0-1.7) to "Highest Need" (4.2-5.0).

Exhibit 32 presents the *Community Need Index*™ (CNI) score of each ZIP code in the Inova Alexandria Hospital community.

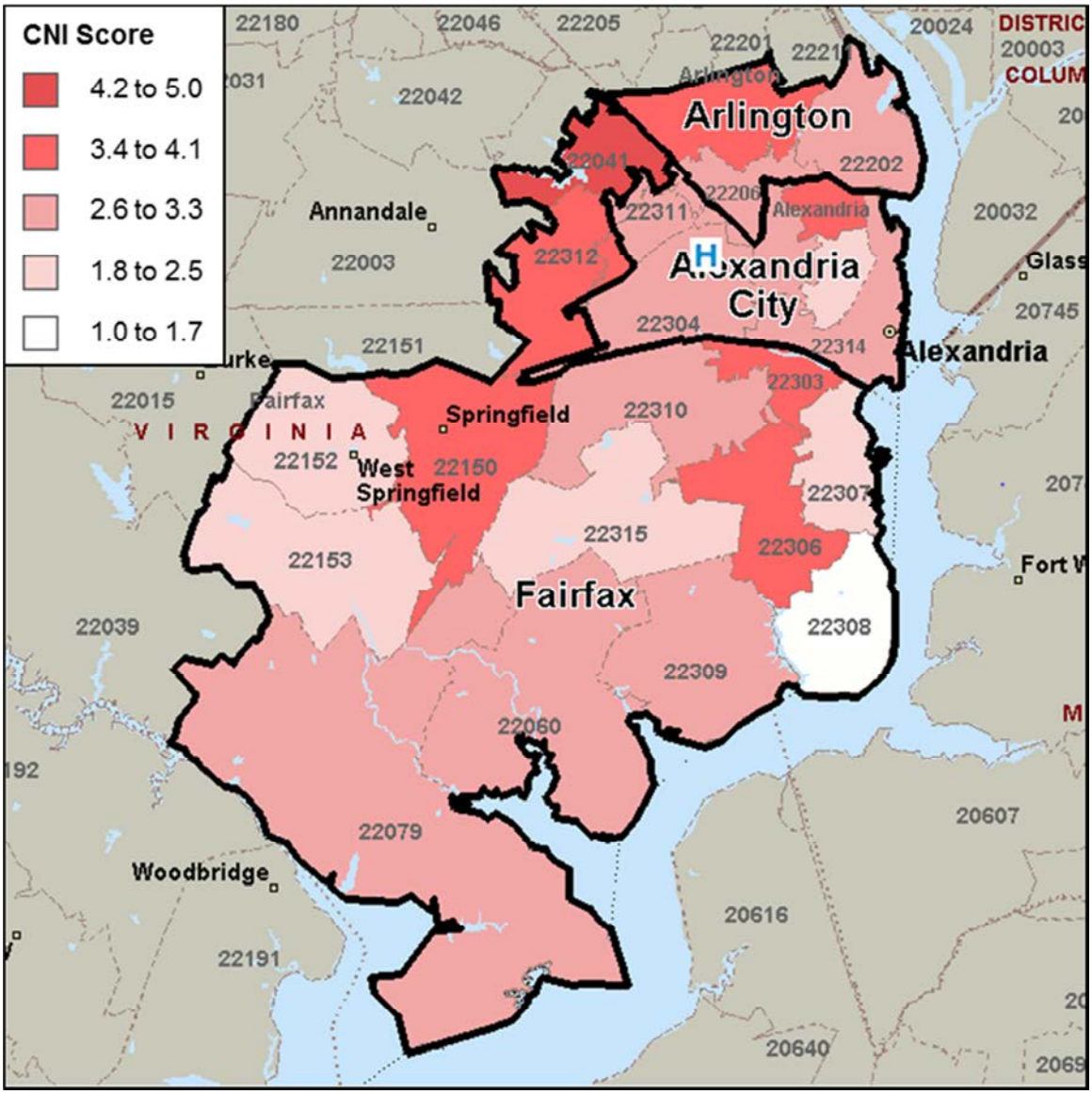
Exhibit 32: Community Need Index™ Score by ZIP Code, 2015

ZIP Code	County	Community	CNI Score
22041	Fairfax	Lincolnia/Bailey's Crossroads	4.4
22305	Alexandria City	Alexandria/Old Town	4.0
22150	Fairfax	Springfield	4.0
22306	Fairfax	Mount Vernon South/Ft. Belvoir	4.0
22312	Fairfax	Lincolnia/Bailey's Crossroads	3.8
22204	Arlington	Shirlington/South Arlington	3.8
22303	Fairfax	Mount Vernon North	3.4
22309	Fairfax	Mount Vernon South/Ft. Belvoir	3.2
22302	Alexandria City	Alexandria/Old Town	3.0
22304	Alexandria City	West Alexandria	3.0
22311	Alexandria City	West Alexandria	3.0
22314	Alexandria City	Alexandria/Old Town	3.0
22206	Arlington	Shirlington/South Arlington	3.0
22310	Fairfax	Franconia/Kingstowne	2.6
22060	Fairfax	Mount Vernon South/Ft. Belvoir	2.6
22079	Fairfax	Lorton/Newington	2.6
22202	Arlington	Shirlington/South Arlington	2.6
22301	Alexandria City	Alexandria/Old Town	2.4
22307	Fairfax	Mount Vernon North	2.4
22315	Fairfax	Franconia/Kingstowne	2.4
22152	Fairfax	Springfield	2.0
22153	Fairfax	Springfield	1.8
22308	Fairfax	Mount Vernon South/Ft. Belvoir	1.4
IAH Community Average			**3.1**
Alexandria City Average			**3.1**
Arlington County Aveage			**2.8**
Fairfax County Average			**2.7**

Source: Dignity Health, 2015.

Exhibit 33 presents these data in a community map format.

Exhibit 33: Community Need Index, 2015



Source: Microsoft MapPoint and Dignity Health, 2015.

The CNI indicates that highest need areas are in Bailey's Crossroads (ZIP code 22041), Alexandria (22305), Springfield (22150), and Mount Vernon South (22306).

Food Deserts

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live in a "food desert," defined as low-income areas more than

one 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. Many government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these food deserts.

Exhibit 34 illustrates the location of food deserts in the community.

Exhibit 34: Food Deserts

Source: Microsoft MapPoint and U.S. Department of Agriculture, 2015.

The food desert in the community is located in Mount Vernon South/Fort Belvoir.

Medically Underserved Areas and Populations

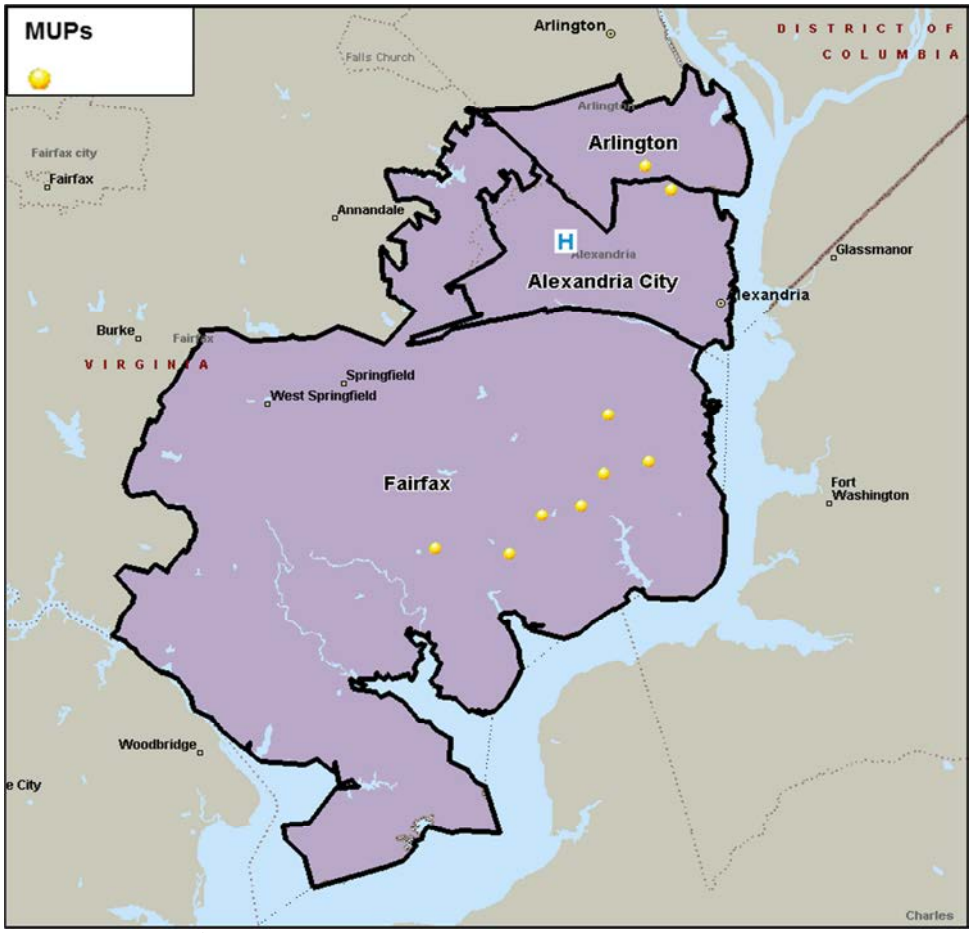
Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[9] Areas with a score of 62 or less are considered "medically underserved."

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP 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."[10]

There are 11 census tracts within the hospital's community that have been designated as areas where Medically Underserved Populations are present (**Exhibit 35**). These areas fall primarily along the Richmond Highway corridor.

[9] Heath Resources and Services Administration. See http://www.hrsa.gov/shortage/mua/index.html
[10] *Ibid.*

Exhibit 35: Medically Underserved Populations



Source: Microsoft MapPoint and HRSA, 2015.

Description of Other Facilities and Resources within the Community

Federally Qualified Health Centers

Federally Qualified Health Centers (FQHCs) are established to promote access to ambulatory care in areas designated as "medically underserved." These clinics receive enhanced reimbursement for Medicaid and Medicare services and most also receive federal grant funds under Section 330 of the Public Health Service Act. There currently are three FQHC organizations operating multiple sites in Northern Virginia (**Exhibit 36**).

Exhibit 36: Federally Qualified Health Centers

Facility	County	ZIP Code	Address
Neighborhood Health King Street Dental	Alexandria City	22302	4480 King St
Neighborhood Health at the Casey Clinic	Alexandria City	22304	1200 N Howard St
Neighborhood Health at Alexandria CSB	Alexandria City	22314	720 N Saint Asaph St
Neighborhood Health at 2 East	Alexandria City	22305	2 E Glebe Rd
Neighborhood Health at the WOW Bus	Alexandria City	22305	2 E Glebe Rd
Neighborhood Health at Richmond Highway	Fairfax	22306	6677 Richmond Hwy
Loudoun Community Health Center- Healthworks of Northern Virginia	Loudoun	20176	163 Fort Evans Rd Ne
Loudoun Community Health Center- Healthworks of Northern Virginia	Fairfax	20170	1141 Elden St Ste
Greater Prince William Community Health Center- Dumfries	Prince William	22026	17739 Main St
Greater Prince William Community Health Center- Ridgewood	Prince William	22192	4379 Ridgewood Center Dr
Greater Prince William Community Health Center- Evergreen Terrace	City of Manassas	20110	9705 Liberia Ave

Source: Health Resources and Services Administration, 2016.

Other Clinics for Lower-Income Individuals

In addition to the FQHCs, there are other clinics in the area that serve lower-income individuals. These include the Arlington Free Clinic (Arlington, VA), the Culmore Clinic (Falls Church, VA) and three Community Health Care Network (CHCN) sites currently operated by Fairfax County (Merrifield – ZIP code 22031, South County – ZIP code 22309, and North County – ZIP code 20190). The Arlington Free Clinic, Culmore Clinic and the South County CHCN Clinic are located in the community served by Inova Alexandria Hospital.

In addition to these resources, Inova operates several InovaCares Clinic sites across Northern Virginia. The Alexandria Health Department also provides an array of services at locations in the City of Alexandria.

Hospitals

Exhibit 37 presents information on hospital facilities that operate in the community.

Exhibit 37: Hospitals

Facilty	Facility Type	Number of Beds	ZIP Code	City
Dominion Hospital	Psychiatric	100	22044	Falls Church
Fairfax Surgical Center	Ambulatory Surgical	-	22030	Fairfax
Haymarket Medical Center	Acute	60	20169	Haymarket
HealthSouth Rehab Hospital of Northern Virginia	Rehabilitation	55	20105	Aldie
Inova Alexandria Hospital	Acute	318	22304	Alexandria
Inova Fair Oaks Hospital	Acute	182	22033	Fairfax
Inova Fairfax Hospital	Acute	833	22042	Falls Church
Inova Loudoun Ambulatory Surgery Center	Ambulatory Surgical	-	20176	Leesburg
Inova Loudoun Hospital	Acute	183	20176	Leesburg
Inova Mount Vernon Hospital	Acute	237	22306	Alexandria
Inova Surgery Center at Franconia-Springfield	Ambulatory Surgical	-	22310	Alexandria
Kaiser Permanente Tysons Corner Surgey Center	Ambulatory Surgical	-	22102	McLean
North Spring Behavioral Healthcare	Psychiatric	-	20176	Leesburg
Northern Virginia Eye Surgery Center, LLC	Ambulatory Surgical	-	22031	Fairfax
Northern Virginia Surgery Center	Ambulatory Surgical	-	22033	Fairfax
Novant Health Prince William Medical Center	Acute	130	20110	Manassas
Prince William Ambulatory Surgery Center	Ambulatory Surgical	-	20110	Manassas
Reston Hospital Center	Acute	187	20190	Reston
Reston Surgery Center	Ambulatory Surgical	-	20190	Reston
Sentara Northern Virginia Medical Center	Acute	183	22191	Woodbridge
Skin Cancer Outpatient Surgical Hospital	Ambulatory Surgical	-	22182	Vienna
Virginia Hospital Center	Acute	342	22205	Arlington

Source: Virginia Health Information, 2016.

Other Community Resources

There is a wide range of agencies, coalitions, and organizations available in the region served by Inova Alexandria Hospital. 2-1-1 Virginia maintains a large database to help refer individuals in need to health and human services in the Commonwealth. This is a service of the Virginia Department of Social Services and is provided in partnership with the Council of Community Services, The Planning Council, and United Way chapters in the Commonwealth.

Exhibit 38 identifies the number of agencies with information available at 2-1-1 Virginia, by city and county and by type of service provided.

Exhibit 38: Other Community Resources

Category	Alexandria City	Arlington County	Fairfax County
Health Care	61	60	67
Food	21	20	23
Housing	18	17	16
Mental Health	232	219	226
Substance Abuse Treatment	18	19	19
Assisted Living	113	113	118
Dental Care	22	24	27
Legal Advice/Representation	45	43	47
Financial Aid	32	33	38
Environment	18	23	24

Source: 2-1-1 Virginia.

Additional information about these resources is available at:
http://211virginia.org/consite/index.php

Findings of Other Community Health Needs Assessments

Several other needs assessments and health reports relevant to the Inova Alexandria Hospital community also were reviewed. These reports are as follows:

- Alexandria Council of Human Services Organizations' *Meeting Needs Today: A needs Assessment of the Alexandria Human Services System*
- Virginia Department of Health's *Virginia Health Equity Report*
- Northern Virginia Health Foundation's *How Healthy is Northern Virginia?*
- NoVAHealthFORCE's *The State of the Healthcare Workforce of Northern Virginia*
- Virginia Hospital Center's *Community Health Needs Assessment*
- Partnership for a Healthier Alexandria's *Community Health Improvement Plan*
- Fairfax County's *Community Health Improvement Plan*
- Prince William Coalition for Human Services *Community Health Needs Assessment*
- Novant Health's Prince William Medical Center *Community Health Needs Assessment*
- Sentara Northern Virginia Medical Center's *Community Health Needs Assessment*

Alexandria Council of Human Services Organizations (ACHSO)
ACHSO, a collective of Alexandria nonprofit human services providers, published a March 2015 report, *Meeting Needs Today: A Needs Assessment of the Alexandria Human Services System.* This report highlighted human services needs in the city, and updated previous report issued by ACHSO in 2008.

Key findings were as follows:

- A lack of affordable housing options is a significant problem across human services, especially affecting low-income, disabled, and elderly populations, some of whom spend 70-80 percent of their income on housing
- Early intervention in childhood development needs to be expanded, particularly in areas of intellectual, social, and emotional development
- The inability to communicate information about available services – particularly to immigrant populations – remains a key barrier
- Program eligibility levels are often too high for certain populations in high cost areas to access, especially in regards to child care and Medicaid
- While there are many provider groups dedicated to the identified community needs areas, little government advocacy for these groups exists

Virginia Health Equity Report

In 2012, the Virginia Department of Health published the *Virginia Health Equity Report* to assess the presence of health disparities and health equity issues across the Commonwealth.

Key findings of the report include the following:

- Virginia's fastest growing population is Hispanic, rising 47.8 percent from 2000-2009
- Blacks, Hispanics, and American Indians are disproportionally represented within the 13 percent of Virginians (older than 25) who have not earned a high school diploma
- Compared to Whites, Blacks were 2.4 times more likely to live in poverty, Hispanics were 1.9 times more likely, and American Indians 3 times more likely
- All other racial groups are more likely to be uninsured than Whites, with Hispanics the most likely to be uninsured (2.4 times more likely than Whites)
- Blacks and Hispanics were significantly more likely to say their neighborhood was unsafe compared to Whites, and almost twice as many respondents who reported their neighborhood as unsafe had poor health status (20.3 vs. 11.7 percent)
- 24.6 percent of Blacks reported experiences of perceived racial discrimination, nearly 5 times higher than Whites
- Those who reported experiences of racial discrimination were more than twice as likely to be unhealthy than those who did not and almost 3 times more likely to report mentally unhealthy days
- As well as having poorer health, socioeconomically disadvantaged and racial/ethnic minority populations appear to have higher death rates and shorter life expectancy
- For all 14 leading causes of death in Virginia, those with the lowest education levels have higher rates of death than those with the highest levels of educational achievement
- Black males are expected to live 5 years shorter than Whites and Black females 3 years shorter than White females
- Heart disease, cancer, and cerebrovascular disease/stroke account for two-thirds of all deaths for Whites and Blacks, with mortality rates for Blacks 30 percent greater for these causes than rates for Whites
- Racial inequities are more concentrated in metropolitan areas such as the City of Alexandria

- The annual direct costs of health inequities among disadvantaged populations account for billions of dollars
- Black Virginians are 3.7 times more likely to live in a low Health Opportunity Index (HOI) area than Whites; Whites are 4.2 times more likely to live in a high HOI area
- Hispanics are more likely to live in low HOI areas and less likely in high HOI areas
- These HOI variances are even more pronounced in urban areas
- While Northern Virginia and Alexandria are generally defined as high HOI areas, multiple tracts of low health opportunity can be found
- The infant mortality rate is 7.2 per 1,000 live births in Virginia, but 4.5 for Whites and 12.9 for Blacks
- Virginians with the least educational attainment have a death rate 2.7 times higher than those with more than 12 years of education (1.3 times higher than those with 12 years)

Northern Virginia Health Foundation
The Northern Virginia Health Foundation published its report, *How Healthy is Northern Virginia?* which contains community health indicators for the region.

Findings include the following:
- 9 of the 10 regions of Northern Virginia are ranked in the top 16 in health outcomes for all Virginia cities and counties. However, the City of Fairfax is an outlier at 55
- While based on a small sample size, the City of Fairfax has a mortality ranking of 97 due to a relatively high premature death rate
- Northern Virginia had higher rates of births with late prenatal care than Virginia
- Compared to the Commonwealth as a whole, cancer rates are generally lower in Northern Virginia, with exceptions being breast cancer in the Fairfax Health District and melanoma in the Loudoun Health District
- Rates of HIV diagnosis were higher in Alexandria (27.7 per 100,000) and Arlington (17.1) than Virginia (11.3); and tuberculosis rates were comparatively high throughout the region
- The City of Manassas (1,060.8) and City of Fairfax (876.1) had higher rates of behavioral health discharges than Virginia (786.8)
- 20 percent of adults in the region are at risk for binge drinking, 2 percent higher than the state average
- Over 50 percent of K-12 students in the cities of Alexandria, Manassas, and Manassas Park are eligible for free or reduced lunch
- Approximately 175,000 Northern Virginians live in 49 census tracts that are ranked in the bottom 20 percent statewide for Health Opportunity Index

The State of the Health Care Workforce in Northern Virginia, March 2014
This report, published in 2014 by NoVAHealthFORCE, aimed to identify the shift that had occurred in the regional health care landscape and the job patterns that accompanied this shift. The report covered Arlington, Fairfax, Prince William and Loudoun Counties and the Cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park.

- While a projected shortage of nurses was expected to last through 2020, employers report a sufficient supply of registered nursing candidates
- The area's population has grown 22% in the past decade; minorities currently comprise 31% of the population – a statistic expected to rise to 41% by 2020
- Population and employment opportunities are projected to grow most rapidly in Prince William and Loudoun counties
- Health care job growth is expected particularly in Prince William and Loudoun counties as the population aged 65 plus is expected to increase by 42 percent; an estimated 5,600 new jobs will be needed

Virginia Hospital Center CHNA, 2014
This community health assessment, published in 2014, assessed the Virginia Hospital Center's community, which includes 28 ZIP codes in Arlington and Fairfax Counties and the City of Alexandria. A survey of key informants was conducted to identify the most important community health concerns and gaps.

- Most important community health concerns, by survey response, are as follows: mental health conditions (other than depression) (81%), depression (77%), adult obesity (69%), diabetes (65%), substance abuse-illegal drugs (65%), alcohol use (62%), dental care (62%), childhood obesity (58%), substance abuse- prescription drugs (58%)
- Important community service gaps (by survey response rate): behavioral health services (88%), health care services for uninsured and underinsured (68%), aging services (56%), dental care (56%), and health care insurance coverage (56%)
- Age 65+ population expected to grow 17% from 2013-2018 and Hispanic population expected to grow 11%
- Births without prenatal care in the first 13 weeks of pregnancy comprise 17% of all live births in region, compared to 13% across Virginia
- Arlington (4.1), Fairfax (4.8), and Alexandria (4.4) all have lower five-year average infant mortality rate per 1,000 live births than Virginia (6.7)
- 19% of area at risk for binge drinking; 17% are smokers
- 36% have high cholesterol and 29% have high blood pressure
- 22% have arthritis, 9% have asthma, and 8% have diabetes
- In describing health status, 17% of respondents stated they had "fair or poor" health; additionally, 17% of population responded that they are limited in activities because of physical, mental, or emotional problems
- 15% of adults and 6% of children in the area are uninsured

Alexandria Community Health Improvement Plan for 2014-2019
The Alexandria Community Health Improvement Plan was published in January 2015 by the Partnership for a Healthier Alexandria and (as described in an introductory letter from the Chair of the Partnership) "is intended to be a roadmap for eliminating barriers to and creating opportunities for improving the health and well-being of everyone who lives, plays and works in Alexandria."

The Alexandria CHIP contains "three broad goals, eight priorities and multiple strategies and key activities."

- The eight priorities include:
    - Access to Care
    - Adolescent Health and Well-being
    - Aging Well in Place
    - Clean and Smoke Free Air
    - Healthy Eating and Active Living
    - HIV/Aids Prevention and Care
    - Maternal and Child Health
    - Social Stigma of Mental Illness (Mental Health, including Social Stigmatization)
- Key data findings in the Alexandria CHIP include:
    - One in four Alexandria residents were born outside of the U.S. and nearly one in three speak a language other than English at home
    - Alexandria's infant mortality rate and low birthweight are lower than rates for other districts in Northern Virginia
    - Teen pregnancy rate of 30.9 per 1,000 females aged 10-19 still one of highest in Northern Virginia
    - Rates (per 100,000) for new cases of HIV was 33.3 and for early syphilis 24.3, both among the highest in Northern Virginia
    - Only 70.1% of pregnant women initiated prenatal care in first trimester
- The CHIP includes an array of tactics designed to address concerns in the eight priority areas

Fairfax County Community Health Improvement Plan for 2013-2018
This report was published in 2013 as a product of the Fairfax County Health Department and the Partnership for a Healthier Fairfax, a diverse coalition of citizens and business organizations.

The priority issues of the report were as follows:

- Improve the community environment to promote good health
    - Identified a need for health considerations in urban planning, development, and transportation, as well as identifying the environmental impacts and health impacts that urbanization bring
- Increase opportunities for physical health to promote active living
    - The rising rates of obesity among youth and adults necessitates this goal
- Make healthy food affordable and accessible
- Reduce tobacco use and exposure to secondhand smoke
- Expand the health workforce to meet the needs of the community
    - The current health workforce is aging
    - There is also an increasing demand for primary and specialty care providers
    - The community believes there is a lack of racial and ethnic diversity among its providers, making it difficult for certain groups to find adequate care
- Improve access and quality of health care services
    - There are many challenges in navigating the complex system of services, so more information is needed
- Integrate public health data to improve monitoring, analysis, reporting and evaluation of community health

- Current data is abundant, but fragmented, necessitating more coordination and monitoring of health disparities and outcomes in the community

Prince William Coalition for Human Services Community Health Needs Assessment
This 2013 report focused on the Greater Prince William area, including Prince William County and the cities of Manassas and Manassas Park.

The report concluded:

- While county rankings are in top 15, rankings in general dropped since the last Prince William Needs Report published (they attribute this to economic recession, possibly, and the aging and increasingly diverse population)
- County rank for high school graduation rate fell from 75 to 88% between 2011-12 for Prince William County
- Diabetes death rate (per 1,000) increased from 12.2 to 18.3 from 2010-11
- Still very low health literacy, which leads to a lot of treatment for preventable illnesses and confusion about next steps after seeing a physician
- Prince William has a relatively high percent of uninsured adults, and additional issues with access to care caused by lack of health literacy, transportation needs and fewer primary care physicians
- There are long waiting lists for mental health services, including counseling, care coordination, case management, and treatment of serious mental illnesses
- Ongoing issues with support services, such as housing, employment, and transportation, exist for those with disabilities
- From FY2010 to FY2012, the number of people with intellectual disabilities on the waiting list for day support services grew from 22 to 62
- Youth population increases by over 2,000 people a year and many are without parental guidance after school, so developing and sustaining youth activities is needed
- Physical space for activities is limited
- There is a deficit of 8,220 housing units for those who make less than $27,770 annually
- The percent of children receiving free/reduced lunch has been increasing (32% in 2008, 37% in 2012)
- Crime statistics have been decreasing steadily from 2005 to 2012

Prince William Medical Center Community Health Needs Assessment
Novant Health is a not-for-profit health system that consists of 15 hospitals across North Carolina, Virginia, and South Carolina. Their Prince William Medical Center is an acute care hospital, established in 1964, that has been part of Novant Health since 2009. The service area for the hospital includes Prince William County, Manassas City, Manassas Park City, and parts of Fauquier County.

This 2013 report concluded the following:

- The Greater Prince William area has twice as many foreign-born residents who speak another language than English and three times as many people of Hispanic origin as Virginia.
- The area has a higher percentage of children under the age of 18 and a lower percentage of people over 65 than the Commonwealth.

- In 2012, the top reasons for emergency department hospitalizations at the hospital were as follows:
    - Pneumonia (296 cases)
    - Alcohol withdrawal (240 cases)
    - Septicemia (180 cases)
    - Urinary tract infection (143 cases)
    - Acute kidney failure (141 cases)
    - Episodic mood disorders (141 cases)
- The prioritized health needs of the Greater Prince William area were as follows (in order, 1 through 10):
    - Cancer
    - Heart disease
    - Unintentional injury
    - Brain disease
    - Chronic lower respiratory disease
    - Diabetes mellitus
    - Septicemia
    - Nephritis and nephrosis
    - Influenza and pneumonia
    - Suicide
- The top ten needs of Fauquier County are:
    - Adult obesity
    - Mental illness
    - Diabetes
    - Childhood obesity
    - Alcohol use
    - Heart disease and stroke
    - Substance abuse (illegal drugs)
    - Dental care and oral health
    - Substance abuse (prescription drugs)
    - Alzheimer's disease

Sentara Northern Virginia Medical Center Community Health Needs Assessment

The 2013 needs assessment by Sentara Northern Virginia examined parts of Fairfax County, Prince William County, and Stafford County and found the following:

- The most important (more than 50% respondents mention) community health concerns identified by survey respondents were: adult obesity (78%), childhood obesity (70%), diabetes (69%), high blood pressure (64%), mental health conditions other than depression (62%), dental care/oral health (56%), depression (52%) and cancer (49%)
- The most important community service gaps identified by survey respondents: behavioral health services (94%), health care services for uninsured/underinsured (66%), dental (58%), homeless services (51%) and aging services (51%)
- Fairfax County had an infant mortality rate of 4.9 per 1,000 and Prince William a rate of 6.3 in 2011
- Estimated health risk factors for adults in the study area in 2012:
    - 21% smokers and 23% at risk for binge drinking

    - 35% had high cholesterol and 28% high blood pressure
    - 10% had asthma, 9% diabetes, and 21% arthritis
    - 16% of the population reported their health status as fair or poor
- 17% of adults and 7% of children were uninsured

PRIMARY DATA ASSESSMENT

Community input (primary data) was gathered through the design and administration of a community survey and through key informant interviews. This section summarizes findings from this process.

Community Survey Findings

In total, 2,232 surveys were received from communities served by all Inova hospitals, and 584 surveys were received from residents of the Inova Alexandria Hospital community.

It is important to note that the survey utilized a convenience sampling methodology, and not a random sampling approach, such as one carried out by dialing randomly selected phone numbers. For this reason, findings from the survey are not generalizable to or representative of community-wide opinion. Given this, results from the community survey were not factored into the decision making process for significant health needs, but have been included in the overall assessment because they may corroborate and supplement the other data sources, and may be helpful in identifying potential health disparities.

Respondent Characteristics

Of the 584 surveys from the hospital's community:

- About 70 percent of responses were received from residents of ten ZIP codes: 22309, 22079, 22306, 22304, 22153, 22305, 22152, 22308, 22041, and 22310;
- Approximately 78 percent were female (456 respondents indicated their gender; 354 of these as female);
- 24 percent indicated they were Hispanic (or Latino);
- 16 percent indicated they were Black or African American; 70 percent were White/Caucasian;
- 28 percent indicated they were between 40 and 54 years of age; 27 percent 65 years of age or older;
- 25 percent indicated annual household income below $25,000; 11 percent between $25,000 and $49,999; 24 percent between $50,000 and $99,999; 21 percent between $100,000 and $149,999; 19 percent $150,000 and above; and
- 46 percent indicated they had private health insurance; 16 percent that they were uninsured.

Results: Inova Alexandria Hospital Community Residents

Exhibits 39 through 42 summarize survey responses from residents of the Inova Alexandria Hospital community.

Exhibit 39
Question: What do you think are the most important health issues in your community/neighborhood? Check only 3.

Issue	Responses	Percent of Respondents
Access to care	191	32.7%
Aging problems (e.g., arthritis, hearing/vision loss)	149	25.5%
Housing that is adequate, safe and affordable	138	23.6%
Mental health problems	130	22.3%
Overweight/Obesity	126	21.6%
Alcohol/Drug abuse	80	13.7%
Diabetes	75	12.8%
Heart disease and stroke	72	12.3%
Lack of exercise	69	11.8%
Cancers	66	11.3%
Dental problems	64	11.0%
High blood pressure	63	10.8%
Nutrition	37	6.3%
Other (please specify)	35	6.0%
Domestic Violence	33	5.7%
Bullying	21	3.6%
Teenage pregnancy	20	3.4%
Tobacco Use	20	3.4%
Child abuse/neglect	17	2.9%
HIV/AIDS	13	2.2%
Respiratory/lung disease	11	1.9%
Infectious diseases (e.g., hepatitis, TB)	9	1.5%
Motor vehicle crash injuries	9	1.5%
Gun-related injuries	8	1.4%
Suicide	8	1.4%
Lyme Disease	6	1.0%
Sexually transmitted diseases	6	1.0%
Homicide	2	0.3%
Rape/sexual assault	2	0.3%
Infant death	1	0.2%

*Note: 23 responses were excluded due to respondents choosing more than 3 responses
Source: Inova Health System, 2016.

Over 20 percent of respondents indicated access to care, aging problems, safe and affordable housing, mental health problems, and obesity were among the most important health issues in the community. Substance abuse, diabetes, heart disease and stroke, a lack of exercise, cancers,

dental problems, and high blood pressure were identified by over 10 percent of respondents as among the most important issues.

Exhibit 40
Question: Has a doctor, nurse, or other health professional EVER told you that you had any of the following?

Issue	Percent Yes
High cholesterol	49.4%
Overweight or obese	46.7%
High blood pressure	46.3%
Some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia	37.8%
A depressive disorder, including depression, major depression, dysthymia, or minor depression	24.9%
Asthma	17.3%
Diabetes at any other time	16.0%
Skin cancer	14.6%
Chronic Obstructive Pulmonary Disease or COPD, emphysema or chronic bronchitis	8.1%
Any other types of cancer	7.7%
Diabetes when you were pregnant	6.2%
Kidney disease (Does NOT include kidney stones, bladder infection or incontinence)	6.1%
Angina or coronary heart disease	6.1%
A heart attack, also called a myocardial infarction	5.6%
A stroke	2.4%

Source: Inova Health System, 2016.

Over 15 percent of respondents indicated that a health professional had told them that they had: high cholesterol, obesity/overweight, high blood pressure, some form of arthritis, depression (mental health problems), asthma, or diabetes.

Survey questions 9 and 10 asked about access to care, and for those unable to access needed medical care, the reasons why not, by service type. **Exhibit 41** identifies the number of respondents who indicated access challenges for each type of service.

Exhibit 41: Respondents Unable to Access Services, by Service Type

Issue	Count
Basic Medical Care	74
Dental Care	60
Mental Health Care	33
Medical/ Surgical Specialty Care	26
Medicines	25
Medical Supplies	17

Source: Inova Health System, 2016.

Basic medical care, dental care, and mental health care were the most frequently identified services.

Exhibit 42 summarizes reasons why respondents have been unable to access these services.

Exhibit 42: Access Barriers by Service Type

Access Barrier	Basic Medical Care	Dental Care	Mental Health Care	Medical/ Surgical	Medicines	Medical Supplies
No Insurance	48	42	17	11	16	10
Can't afford	42	40	18	15	15	11
Insurance wouldn't cover	6	15	7	6	8	6
No transportation	14	6	4	5	4	4
Language barriers	10	5	6	8	4	4
Can't get appointment	10	7	8	4	3	3
Inconvenient hours	16	7	3	4	3	2
Don't know how to schedule appointment	3	5	8	3	3	3
No child care	5	5	3	3	3	3
Other reasons	4	3	5	4	2	2
Don't trust providers	4	3	4	3	1	1
Cultural/religious beliefs	0	0	0	0	0	0

Source: Inova Health System, 2016.

A lack of insurance coverage (particularly for dental care) and a lack of affordability were the top two most frequently identified access barriers. For basic medical care, a lack of transportation and inconvenient hours were identified as issues by a number of respondents.

Results: Northern Virginia-Wide Responses by Demographic Cohort

In addition to assessing responses from all residents of the Inova Alexandria Hospital community, survey responses from across the area served by all Inova hospitals were assessed to understand how responses vary by demographic cohort (ethnicity, race, age, gender, income, and insurance status). The following observations are based on analyzing the 2,232 survey responses, by cohort.

- Responses by race:
    - Among the 2,232 survey responses, 1,299 respondents indicated they are White or Caucasian, 144 indicated they are Black or African American, 90 Asian (including from Bangladesh, India and Pakistan), and 84 some other race; 615 respondents left this survey question blank.
    - Regarding the "most important health issues" in the community, the following issues ranked comparatively high:
        - Black/African American respondents: alcohol/drug abuse, diabetes, high blood pressure, dental problems, and safe and affordable housing
        - Asian respondents: diabetes and high blood pressure
        - White/Caucasian respondents: mental health problems, heart disease and stroke, cancers, and Lyme disease

- The survey included questions about the number of days (during the past 30) when mental health and physical health "was not good." Average responses were:
    - Black/African American respondents: 5.4 days (mental health), 6.3 days (physical health)
    - Asian respondents: 4.1 days (mental health), 4.6 (physical health)
    - White/Caucasian respondents: 3.8 days (mental health), 4.6 days (physical health)
- Regarding where respondents and their family members go for regular health care, Black/African American and Asian respondents indicated greater reliance on free or low-cost clinics or health centers (approximately 10 percent of these respondents versus 3 percent for White/Caucasian individuals). White/Caucasian respondents reported greater use of urgent care centers or walk-in clinics.
- Regarding whether the respondent had been told by a health professional that he/she had certain conditions:
    - More Black/African American respondents indicated "yes" for high blood pressure (46 percent) and for overweight/obesity (59 percent) than for White/Caucasian (40 percent and 45 percent respectively)
    - More White/Caucasian respondents indicated "yes" for high cholesterol, skin cancer, and depression than other groups
    - More Asian respondents indicated "yes" for diabetes than other groups (12 percent, versus 7 percent for Black/African American and 4 percent for White/Caucasian)
- Black/African American respondents indicated: more exposure to second hand smoke, and less healthy diets (more fast food, fewer servings of vegetables and fruit).
- Thirty-one percent of White/Caucasian respondents indicated they have more alcoholic drinks per day (more than 2 per day for men or 1 per day for women) versus 12 percent for Asian and 19 percent for Black/African American respondents.

- Responses by age group:
    - Among the 2,232 survey responses, 57 were 18 to 25 years of age, 336 were 26 to 39, 568 were 40 to 54, 412 were 55 to 64, and 347 were 65 years of age and older; 512 individuals did not provide their age range.
    - Regarding the "most important health issues" in the community:

        - A number of issues were ranked highly across all age groups, including access to care, cancers, diabetes, housing that is affordable and safe, obesity/overweight and lack of exercise, and mental health problems.

        - Respondents in older age groups mentioned "aging problems" as the number one issue. Heart disease and stroke and high blood pressure also were ranked among the most important issues.

        - Respondents in younger age groups mentioned nutrition, domestic violence, and teenage pregnancy as problematic.

    - Almost 80 percent of older respondents indicated they visit the emergency room only in the event of a "real emergency." Almost one-half of those in younger age groups indicated they visit emergency rooms for other reasons, such as a lack of health insurance or "doctor's office was closed" or "could not see me/my family."

    - Survey responses indicate that as community residents age, they are more likely to have been told by a health professional that they have one or more health conditions, such as high blood pressure, arthritis, or high cholesterol. This is not the case, however, for depression which ranges from 19 to 27 percent of respondents across all age groups.

    - Certain health-related behaviors appear less prevalent within the 65 years and older age group, such as exposure to second-hand smoke and eating fast food. This age group, however, has the highest proportion indicating they do not "exercise for 30 minutes or more a day."

- Responses by income level:
    - Among the 2,232 survey responses,

        - 45 were from individuals who indicated their annual household income was less than $10,000,

        - 80 were received from those with income between $10,000 and $24,999,

        - 172 for $25,000 to $49,999,

        - 389 for those $50,000 to $99,999,

        - 333 for those $100,000 to $149,999, and

        - 392 with incomes of $150,000 and higher.

        - 821 individuals did not provide their income range.

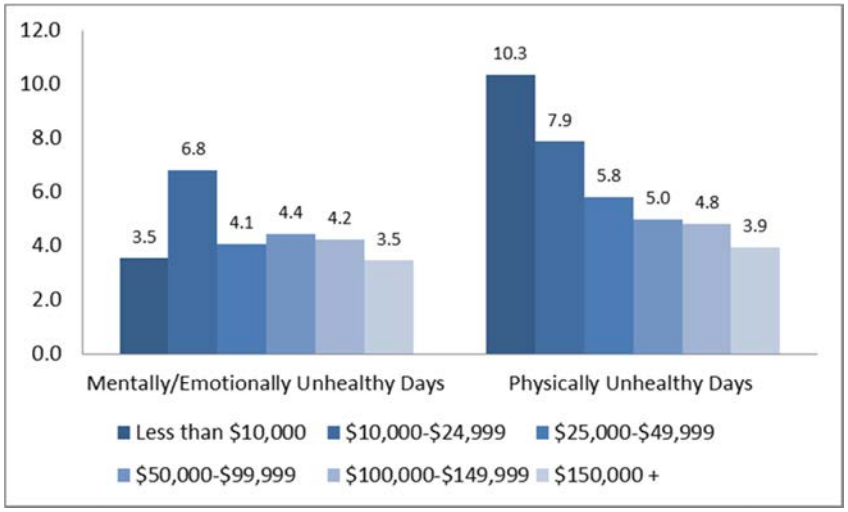
    - Regarding the "most important health issues" in the community:

- Dental problems, diabetes, and bullying were ranked comparatively high by the lowest income groups.

- Heart disease and stroke, overweight/obesity and mental health problems were ranked comparatively high by the highest income groups. "Mental health problems" and "Access to care" were ranked the most important health issues (tied) for the $150,000 and above group. Access to care was ranked the most important health issue in the community in all other groups as well.

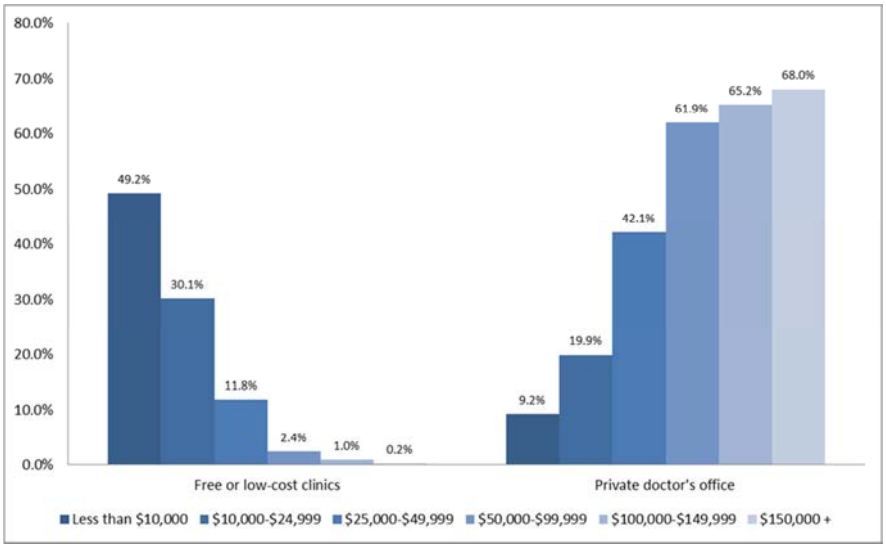
o Regarding the number of days (during the past 30) when physical health "was not good," the average for all respondents was 5.0 days; however, those with incomes under $10,000 averaged 10.3 days. This statistic fell as income levels rose, with 10.3 days for the lowest income category and 3.9 days for the highest income category (**Exhibit 43**).

Exhibit 43: Average Monthly Unhealthy Days, by Income Level



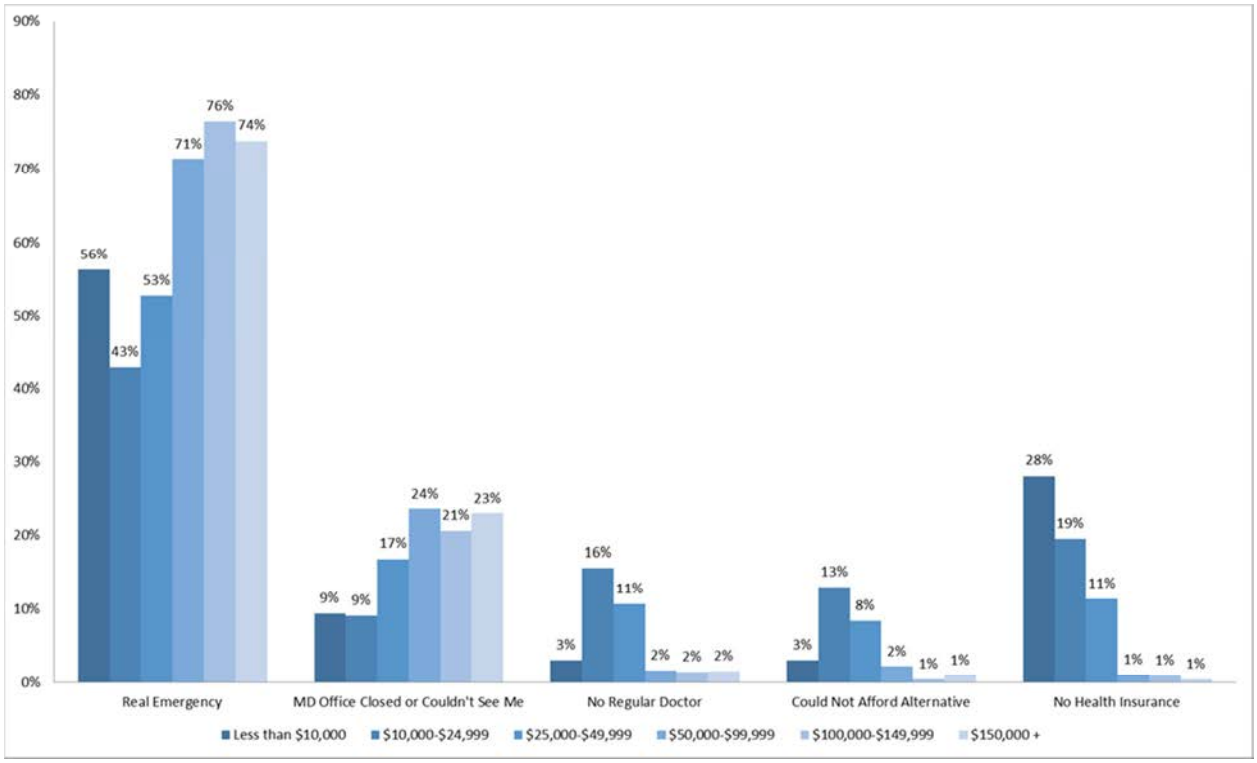
o Respondents with the lowest income levels relied the most on free or low-cost clinics or health centers and on hospital emergency rooms for their regular health care (**Exhibit 44**). Most respondents in higher income categories received regular care in private doctor's offices (e.g., 370 out of the 392 respondents with incomes of $150,000 and higher).

Exhibit 44: Use of Free Clinics and Private Doctor's Offices, by Income Level



- Over seventy percent of higher income respondents indicated they tend to go to an emergency room in the event of a real emergency (unless their doctor's office is closed or otherwise unavailable). Lower income respondents go to an emergency room either because they are uninsured or because they do not have a regular medical doctor (**Exhibit 45**).

Exhibit 45: Reasons for Emergency Room Visit(s), by Income Level



- Lower-income respondents indicated greater prevalence of diabetes and COPD or emphysema than higher income groups.

- Certain health-related behaviors appear more prevalent within lower-income groups, such as poor nutrition and unprotected sex.

- Respondents indicated that having alcoholic drinks (more than 2 per day for men or 1 per day for women) increases with income: 5 percent of those with incomes under $10,000 and 12 percent of those with incomes between $10,000 and $24,999 indicated this level of alcohol use – increasing to 35 percent for those with incomes of $150,000 and higher.

- Responses by payer source:
  - Among the 2,232 survey responses, 122 indicated they were uninsured; 1,594 indicated they had some form of insurance coverage – either Medicare, Medicaid, other governmental (e.g., TRICARE) or private insurance. 516 respondents did not provide insurance coverage information.

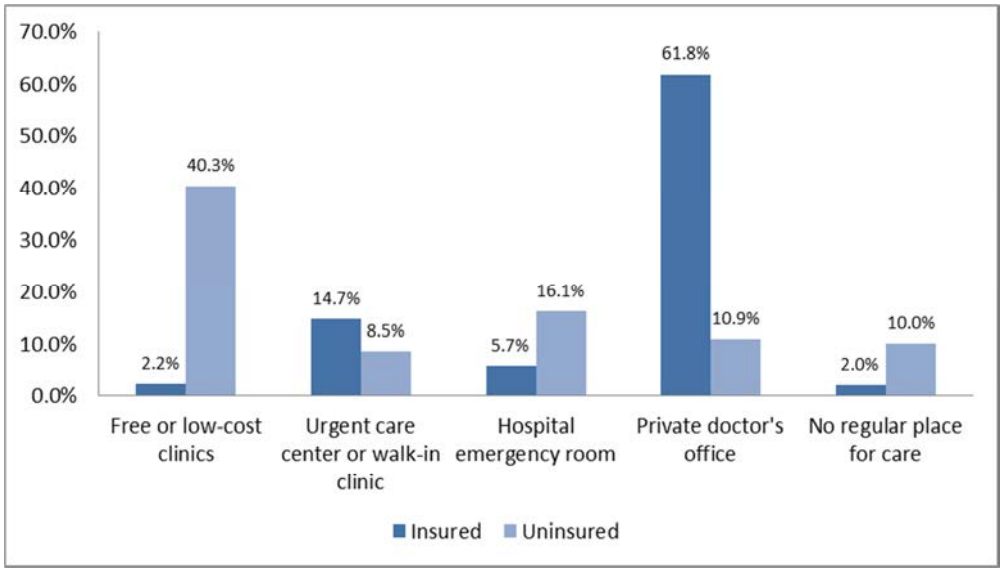
  - Three out of the top five most important issues were the same among both those with and without insurance (access to care [1], aging problems [4] and housing that is safe and affordable [5]). Among the uninsured, dental problems and alcohol/drug abuse were number 2 and 3 respectively. For insured respondents,

the second and third most important issues were mental health problems and overweight/obesity.

- Regarding the number of days (during the past 30) when physical health "was not good," the average for uninsured respondents was 7.4 days and for insured respondents was 4.8 days.

- Fifty-six (56) percent of uninsured respondents said they rely on free or low-cost clinics or health centers and on hospital emergency rooms for their regular health care, compared to 8 percent for those with insurance (**Exhibit 46**). Ten (10) percent of uninsured respondents indicate they "don't have a regular place for medical care" compared to 2 percent for those with insurance.

Exhibit 46: Types of Providers Used, by Insurance Status



- Seventy-eight (78) percent of uninsured respondents indicated that they went to an emergency room in the last year, with 37 percent of these visits representing "real emergencies." Reasons for these visits included a lack of health insurance, not having a regular medical doctor, and lack of affordability. Forty-five (45) percent of insured respondents went to an emergency room, with 73 percent of these visits being a "real emergency."

- Generally, fewer uninsured respondents had been told by a health professional that they have one of a list of specific health conditions than insured respondents, with the exceptions of diabetes and "overweight or obese."

- Regarding questions about health behaviors, uninsured respondents indicated that they have less healthy nutritional and exercise habits, more unprotected sex, and more tobacco and e-cigarette use.

Survey findings varied significantly depending on respondent ethnicity, race, income, insurance status, and other demographic characteristics.

Key Stakeholder Interviews

Findings

The following issues were identified by external informants as those of greatest concern to community health in the Inova Alexandria Hospital community, and are presented in alphabetical order.

Access Issues. One of the chief barriers to improving community-wide health outcomes is the inability to access available resources. Lack of knowledge of available services, lack of health insurance or knowledge on how to use it, transportation, and providers not accepting Medicaid and other insurances are some of the main barriers to access. Many interviewees indicated that social determinants of health were also a large barrier, and disproportionately affect the community's low socio-economic status groups, immigrant populations, those with language barriers, minority populations, elderly adults, and adolescents. Adolescents were mentioned frequently as a group in need, given comparatively high teen pregnancy rates and recent data regarding mental health concerns. The areas with access issues most cited were:

- **Access to Dental Care.** A majority of respondents believed that the dental care available in the community was not enough to serve the needs of the population, particularly for those without insurance. Others believed that oral health was an important concern that, without prevention, could lead to more severe health concerns.

- **Access to Specialty Care.** Many respondents indicated that access to specialty care was difficult to ensure for all in the community. While access has improved in recent times, there are still challenges getting specialty care, especially for the low-income or uninsured. Interviewees found it unreasonable that many in the area were sent many miles away for care, especially since the area is metropolitan. This also gave rise to transportation concerns.

- **Access to Primary Care.** Interviewees indicated that consistent primary care was still difficult to access. Respondents believed that segments of the population still use the emergency department for primary care. Several respondents expressed a desire that everyone in the region could find a consistent "medical home" for primary care and prevention. Clinics that serve low-income members of the community report challenges in recruiting and retaining health professionals.

- **Access to Transitional Care.** After medical discharge, people in the community found it difficult to find services that helped them transition and recover. Community members believed more community workers or in-home nurses could help alleviate this problem.

Conditions and Care of the Elderly. Aging well in the community was a top concern of many interviewees. With an aging population, many chronic conditions associated with elderly

populations arose as areas of need, with dementia the most notable. The growth of this population means more resources will be needed, and respondents noted that there are not enough senior living facilities (especially for low-income), a lack of providers accepting Medicare, challenges with transportation for seniors, and isolation among this population.

Cultural Competency in Care. A majority of those interviewed indicated that immigrants, refugees, undocumented immigrants, and populations with language barriers faced more difficulties in accessing care. Respondents also indicated that there was a lack of cultural understanding in the care that many of these populations receive, leading to a reluctance in finding proper care. Several interviewees expressed a desire for cultural learning programs and expanded translation services.

Healthcare Literacy. Many respondents indicated that the community's lack of understanding of healthcare and health insurance was one of the biggest detriments to health in the region. Interviewees indicated that poor information on healthy food and lifestyles had led to poor outcomes, including diabetes and obesity. Additionally, many in the community do not know how to get health insurance or even properly use health insurance after gaining coverage.

Poor Mental Health and Lack of Access to Mental Health Services. A large majority of those interviewed identified poor mental health and a lack of mental health resources as a significant need in the community. A number of those interviewed mentioned that the stigma around mental health was negatively affecting the community. Groups that were identified as particularly prone to mental health concerns were adolescents, those from low-income families, and Hispanic females. Concerns were also raised regarding the type of mental health services that were accessible, including long-term mental health care, outpatient psychiatric care, and adolescent services.

Substance Abuse. The misuse of substances, both legal and illegal, arose as an issue from those interviewed. The most commonly cited substance issue was alcohol abuse and binge drinking in the community. Concerns about opiate use, misuse of prescription drugs, and synthetic marijuana also were present.

Unhealthy Lifestyle and Related Conditions. Across all interviews the health behaviors of greatest concern were poor diet and nutrition and limited physical activity. Smoking, tobacco use, and unsafe sex also were also mentioned. Unhealthy diets were attributed to limited access to healthy foods for many in lower socio-economic classes and certain cultural groups. Insufficient knowledge about nutrition was mentioned in many interviews as a contributing factor to health conditions, along with a misunderstanding of the perceived affordability of fast food. A lack of open spaces and areas for walking and playing were also cited as major concerns that contribute to an unhealthy, sedentary lifestyle. The perception of unhealthy lifestyle drove most of the commonly-cited chronic conditions from interviewees. Obesity, diabetes/pre-diabetes, heart disease, and hypertension were the most often cited conditions and health concerns for the area. Related to this, some respondents also commented that there is a lack of services and attention to general primary and preventive care, instead of merely treating disease.

Interview Participants

Individuals from a wide variety of organizations and communities participated in the interview process (shown in **Exhibit 47**).

Exhibit 47: Interview Participants

Organization	Description	Populations Represented
Alexandria City Government	City Council and City Manager	General population
Alexandria Community Services Board	Mental health crisis intervention	Mentally ill
Alexandria Health Department	City health department	General population
Alexandria Public Health Advisory Commission	City advisory board on health-related matters	General population
Arlington County Government	City Council	General population
Campagna Center	Children and Family Center	Youth, Immigrants,
George Mason University, College of Health and Human Services	University program dedicated to health	General population, Students
Grace Ministries	Faith-based community outreach program	Faith-based community, Immigrant populations
Inova Alexandria Hospital Internal Staff	Inova Alexandria Hospital and patients	Health professionals and patients
Inova Board of Directors	Inova Health System Board	General population
Inova Office of Health Equity	Inova office dealing in health disparities	Marginalized populations, Minority populations
Neighborhood Health	Federally Qualified Health Center	General population, Low income,
Northern Virginia Family Services	Non-profit	Adolescent/youth, Low income, Homeless, Mentally ill
Northern Virginia Health Foundation	Healthcare grant organization	General population, Low Income,
Partnership for a Healthier Alexandria	Citizen-led public health coalition	General Population, Aging &
Route 1 Human Services Task Force	Support and advocacy program for marginalized populations along Richmond Highway	Homeless population, Low income population

APPENDIX A – COMMUNITY SURVEY INSTRUMENT

Your Opinion Matters!

Inova is doing a community health needs assessment to help find and act on the biggest health and healthcare issues in our communities. This survey will help us learn more about health where you live.

This survey will take 15 minutes or less to complete. There are no right or wrong answers to these questions, we want to hear your thoughts and opinions. All answers are completely anonymous and confidential.

Thank you for your time and input.

1. What is your ZIP Code? _____

2. What do you think are the most important health issues in your community/neighborhood? Check only 3.

- ☐ Access to care
- ☐ Aging problems (e.g., arthritis, hearing/vision loss)
- ☐ Alcohol/Drug abuse
- ☐ Bullying
- ☐ Cancers
- ☐ Child abuse/neglect
- ☐ Dental problems
- ☐ Diabetes
- ☐ Domestic Violence
- ☐ Gun-related injuries
- ☐ Heart disease and stroke
- ☐ High blood pressure
- ☐ HIV/AIDS
- ☐ Homicide
- ☐ Housing that is adequate, safe and affordable
- ☐ Infant death
- ☐ Infectious diseases (e.g., hepatitis, TB)
- ☐ Lack of exercise
- ☐ Lyme Disease
- ☐ Mental health problems
- ☐ Motor vehicle crash injuries
- ☐ Nutrition
- ☐ Overweight/Obesity
- ☐ Rape/sexual assault
- ☐ Respiratory/lung disease
- ☐ Sexually transmitted diseases
- ☐ Suicide
- ☐ Teenage pregnancy
- ☐ Tobacco Use
- ☐ Other: _____

3. Thinking about your mental health (including stress, depression, and problems with emotions), for how many days during the past 30 days was your mental/emotional health not good? ____

4. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? _____

5. Where do you and your family members go for regular health care? (Please select all that apply.)
   - ☐ Free or low-cost clinic or health center (like HealthWorks, Neighborhood Health, CHCN Clinic, Arlington Free Clinic, etc.)
   - ☐ Urgent care center or other walk-in clinic (like CVS, Walgreens, etc.)
   - ☐ Hospital emergency room
   - ☐ Health department
   - ☐ Provider of alternative medicine (i.e., herbalist, homeopathic, acupuncturist)
   - ☐ Private doctor's office (MD, Nurse Practitioner, Physician's Assistant)
   - ☐ Chiropractor
   - ☐ I don't have a regular place for medical care
   - ☐ Other: _____

6. During the last year, why did you or a family member go to an emergency room (if at all)? Please select all that apply.
   - ☐ I/my family had a real emergency
   - ☐ The doctor's office was closed or could not see me/ my family
   - ☐ I/my family do not have a regular medical doctor
   - ☐ I/my family could not afford health services somewhere else
   - ☐ I/my family do not have health insurance
   - ☐ Did not go to the emergency room

7. Before today, how long has it been since you last saw a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.
   - ☐ Within the past year (anytime less than 12 months ago)
   - ☐ Within the past 2 years (more than 1 year but less than 2 years ago)
   - ☐ Within the past 5 years (more than 2 years but less than 5 years ago)
   - ☐ 5 or more years ago
   - ☐ Don't know / Not sure
   - ☐ Never

8. Has a doctor, nurse, or other health professional EVER told you that you had any of the following?

	Yes	No	Don't Know/ Not Sure
High blood pressure	☐	☐	☐
High cholesterol	☐	☐	☐
A heart attack, also called a myocardial infarction	☐	☐	☐
Angina or coronary heart disease	☐	☐	☐
A stroke	☐	☐	☐
Asthma	☐	☐	☐
Skin cancer	☐	☐	☐
Any other types of cancer	☐	☐	☐
Chronic Obstructive Pulmonary Disease or COPD, emphysema or chronic bronchitis	☐	☐	☐
Some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia	☐	☐	☐
A depressive disorder, including depression, major depression, dysthymia, or minor depression	☐	☐	☐
Kidney disease? (Does NOT include kidney stones, bladder infection or incontinence)	☐	☐	☐
Diabetes when you were pregnant?	☐	☐	☐
Diabetes at any other time?	☐	☐	☐
Overweight or Obese	☐	☐	☐
Any other chronic condition? Write condition:_____	☐	☐	☐

9. How long has it been since you last went to a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontists.
   - ☐ Within the past year (anytime less than 12 months ago)
   - ☐ Within the past 2 years (more than 1 year but less than 2 years ago)
   - ☐ Within the past 5 years (more than 2 years but less than 5 years ago)
   - ☐ 5 or more years ago
   - ☐ Don't know / Not sure
   - ☐ Never

10. In the past 12 months, was there a time when you needed medical care (including mental health, dental health, medicines, etc.) but could not get it?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know/Not sure

11. If you answered “Yes”, why not? Check all that apply.

	Basic Medical Care	Dental Care	Mental Health Care	Medical/ Surgical Specialty Care	Medicines	Medical Supplies
No insurance	☐	☐	☐	☐	☐	☐
Can’t get appointment	☐	☐	☐	☐	☐	☐
Can’t afford it/ too expensive	☐	☐	☐	☐	☐	☐
Inconvenient hours/can’t get out of work	☐	☐	☐	☐	☐	☐
No child care	☐	☐	☐	☐	☐	☐
Insurance wouldn’t cover	☐	☐	☐	☐	☐	☐
No transportation	☐	☐	☐	☐	☐	☐
Don’t trust medical professionals	☐	☐	☐	☐	☐	☐
Cultural/religious beliefs	☐	☐	☐	☐	☐	☐
Language barrier	☐	☐	☐	☐	☐	☐
Don’t know how to find or schedule an appointment	☐	☐	☐	☐	☐	☐
Other reasons	☐	☐	☐	☐	☐	☐

12. In the last 30 days, did you:

	Yes	No	Don't Know/ Not Sure
Chew tobacco/snuff or smoke cigarettes, cigars, pipes, etc.	☐	☐	☐
Use e-cigarettes	☐	☐	☐
Breath second-hand smoke	☐	☐	☐
Use drugs prescribed for someone else	☐	☐	☐
Have more than 2 alcoholic drinks per day (men) or more than 1 alcoholic drink per day (women)	☐	☐	☐
Drive in a car without a seat belt	☐	☐	☐
Eat fast food more than once in a week	☐	☐	☐
Travel in a car with small children without using a car seat	☐	☐	☐
Spend more than 20 minutes in the sun without sunscreen (during the summer months)	☐	☐	☐
Exercise for 30 minutes or more a day	☐	☐	☐
Eat at least 2 servings of vegetables a day	☐	☐	☐
Eat at least 2 servings of fruit a day	☐	☐	☐
Sleep at least 8 hours every night	☐	☐	☐
Have sex without using a condom or dental dam (if not in a monogamous relationship)	☐	☐	☐

13. Please mark when you have done the following things:

	Less than 12 months	More than 1 year, less than 2 years	More than 2 years, less than 5 years	More than 5 years ago	Don't know/Not sure	Never
Had a colonoscopy	☐	☐	☐	☐	☐	☐
Had a mammogram	☐	☐	☐	☐	☐	☐
Had cholesterol checked	☐	☐	☐	☐	☐	☐
Had a clinical breast exam	☐	☐	☐	☐	☐	☐
Had a pap test	☐	☐	☐	☐	☐	☐
Had a PSA test	☐	☐	☐	☐	☐	☐
Had an HIV test	☐	☐	☐	☐	☐	☐
Got a flu vaccine	☐	☐	☐	☐	☐	☐
Got the pneumonia vaccine	☐	☐	☐	☐	☐	☐
Got the shingles vaccine	☐	☐	☐	☐	☐	☐
Got a tetanus booster	☐	☐	☐	☐	☐	☐

14. Before today, were you at all limited in any activities because of physical, mental, or emotional problems?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know/Not sure

Please answer the following questions so that we can better understand how different members of our diverse community feel about the issues listed above.

15. Are you of Hispanic, Latino/a, or Spanish origin?
    - ☐ Yes
    - ☐ No
    - ☐ Don't know / Not sure / Choose not to answer

16. With which one of these groups do you most identify?
    - ☐ White/Caucasian
    - ☐ Black or African American
    - ☐ Asian, including from Bangladesh, India and Pakistan
    - ☐ American Indian or Alaska Native
    - ☐ Native Hawaiian or Other Pacific Islander
    - ☐ Other
    - ☐ Don't know / Not sure / Choose not to answer

17. How old are you?
    - ☐ 18 – 25
    - ☐ 26 – 39
    - ☐ 40 – 54
    - ☐ 55 – 64
    - ☐ 65 or over

18. Do you have children less than 18 years of age living in your household?
    - ☐ Yes
    - ☐ No

19. What is the highest grade or year of school you completed?
    - ☐ Never attended school or only attended kindergarten
    - ☐ Grades 1 through 8 (Elementary)
    - ☐ Grades 9 through 11 (Some high school)
    - ☐ Grade 12 or GED (High school graduate)
    - ☐ College 1 year to 3 years (Some college or technical school)
    - ☐ College 4-year degree or more (College graduate)

20. What is your annual household income from all sources?

- ☐ Less than $10,000
- ☐ $10,000 - $24,999
- ☐ $25,000 - $49,999
- ☐ $50,000 - $99,999
- ☐ $100,000 - $149,999
- ☐ $150,000+
- ☐ I don't know or choose not to answer

21. How do you pay for your health care?

- ☐ Use cash or credit/debit card (no insurance)
- ☐ Health insurance through my employer or my spouse's employer
- ☐ Private health insurance I pay for
- ☐ Medicaid
- ☐ Medicare
- ☐ TRICARE, VA or Military
- ☐ Indian Health Services
- ☐ Other _____

22. With what gender do you identify?

- ☐ Male
- ☐ Female
- ☐ Transgender – Male to Female
- ☐ Transgender – Female to Male
- ☐ Other: _____

APPENDIX B – ACTIONS TAKEN SINCE THE PREVIOUS CHNA

This appendix discusses community health improvement actions taken by Inova since its last CHNA reports were published, and based on the subsequently developed Implementation Strategies. The information is included in the 2016 CHNA reports to respond to final IRC 501(r) regulations, published by the IRS in December 2014.

Priority Strategic Initiatives

1. Improve collaboration and coordination among organizations providing health and social services.
    a. Inova has representation on the Partnership for a Healthier Alexandria Steering Committee, the Public Health Advisory Council, the Northern Virginia Health Services Coalition.
    b. Along with the City of Alexandria, Inova Alexandria Hospital convenes the City of Alexandria Hospital task Force.
    c. Inova also has a representative as an ex-officio member of the Neighborhood Health (formerly ANHSI) board of directors. Neighborhood Health is an Alexandria-based Federally Qualified Health Center or "FQHC".
    d. In April 2013, more than 50 clergy, faith community nurses and health ministry coordinators turned out for a Palliative Care Conference. Inova Congregational Health Partnership presented the event in partnership with Inova's Palliative Care program, Pastoral Care Services, Life with Cancer® program, and the Community Affairs Executive from Inova Fairfax Medical Campus. Participants learned the many aspects of palliative care, specialized medical care for people with serious illnesses with a goal of improving the quality of life for the patients and their families.
    e. The FACT program, which is offered as a community service at no charge to victims, combines specialized nurse examiners and a private environment so that evidence of abuse can be collected and documented without further traumatizing the victim. The FACT department is also an important component in cross-jurisdictional crime reduction efforts and community outreach programs. FACT representatives serve on five multidisciplinary teams for children in the City of Alexandria as well as Arlington, Fairfax, Loudoun and Prince William counties. In 2015, the program continued to expand its prevention-focused outreach at college campuses and community organizations. Between 2013 – 2015 the FACT Department has helped almost 1,600 individuals.
    f. Inova Alexandria Hospital has been a participant and host site in Project Search, a program that provides real world work experience for young adults with a variety of developmental disabilities.
    g. In 2015 Inova provided grants to community groups addressing population health needs described in the Inova Community Health Needs Assessments. In 2015 funds totaled $30,000 and in 2016 grant funds will increase to $50,000.

2. Improve access to care, including preventive care, primary care, specialty care, and dental care.
    a. Inova works to ensure access to services for the indigent through direct and in-kind support to Neighborhood Health. Contributions from 2013 – 2015 were $727,000.
    b. Inova has also provided direct and in-kind contributions to NOVA Scripts, the Center for Multicultural Human Services, Shenandoah University and the Nova Dental Clinic. Total contributions to these organizations totaled $2.6 million.
    c. Supported the annual Northern Virginia Dental Society's Mission of Mercy event through a cash donation as well as an in-kind phlebotomist for post-exposure testing and post-exposure prophylaxis (PEP) if necessary. Assisted the organization ahead of time with development of a needle stick protocol.
    d. Inova partners with the City of Alexandria Health Department to provide OB/GYN services to low-income county residents at the Casey Clinic. From 2013 – 2015 there were about 750 visits to this program.
    e. Inova Transitional Services is a community-based program developed to identify and bridge gaps between illness and recovery. This model establishes cross-setting communication and collaboration and ensures coordination and continuity of care as patients transfer across care delivery settings. The program trains internal teams and works in partnership with the community to develop improved health outcomes at a lower cost for vulnerable patient populations. The Inova Discharge/Transitional Care Clinic assists patients that have been discharged from the hospital and have no other medical home. Through the Discharge Clinic, patients have a place to go that will help them manage their complex disease states until they can be transitioned to a permanent medical home. From 2013 – 2015, Inova Transitional Services provided over 36,000 encounters.
    f. Inova Juniper Program (IJP) provides outpatient primary medical care, mental health therapy, substance abuse treatment, pharmaceutical assistance, nutritional counseling and medical case management services to 1,638 persons living with HIV disease in the suburban Virginia region. To maximize accessibility for clients, services are provided at the main location in Fairfax, as well as six satellite clinics (Dumfries, Manassas, Mt. Vernon, Arlington/Falls Church, Leesburg, and Herndon), hospitals, homes and other community locations throughout the region. From 2013 – 2015, Inova Juniper provided over 100,000 visits throughout the region.
    g. Care Connection for Children (CCC) is funded by the Virginia Department of Health. The goal of CCC is to help families coordinate community and educational resources with medical expertise to ensure that children with special healthcare needs can reach their maximum potential. CCC partners with families of children who have chronic healthcare needs to help open doors to needed resources and coordinate quality family-centered care. CCC is committed to helping children maximize their potential in a caring, innovative and culturally sensitive manner. From 2013 – 2015, CCC served 1,936 families.
    h. The Inova Lions Eye Clinic provides free eye care (comprehensive ophthalmic care, including medical and surgical care for all types of conditions of the eye) to uninsured adult patients who are at or below 200 percent of the Federal Poverty

Guidelines. Clinic staffing includes an employed ophthalmologist, and ophthalmic technician, and a bilingual receptionist. A number of volunteer specialist physicians also help care for clinic patients. The clinic is funded both by Inova and the Virginia Lions Eye Institute Foundation. From 2013-2015, the clinic had over 8,000 patient visits.

i. The Inova Kellar Center has provided behavioral health services for children, adolescents, and their families for twenty years. The program provides a full continuum of outpatient services and programs, including individual, family and group therapy, medication management, psychiatric evaluations, psychological testing, intensive outpatient programs, intensive home based services, and partial hospitalization programs. Specific programs also include the After School Intensive Outpatient Program (for male and female adolescents ages 13 and above) and The Kellar School, which served students grades 3 through 12 who have been identified for special education services. The treatment services and programs are provided to children and families regardless of ability to pay.
j. Inova Partnership for Healthier Kids (PHK) is a community-based outreach program designed to increase access to care for uninsured children in Northern Virginia. Through partnerships with schools in Fairfax County, Loudoun County, Prince William County, the City of Alexandria, and with numerous community organizations, the program provides families with application and enrollment assistance for Medicaid and CHIP, and referrals to local safety net providers. From 2013 – 2015, the program helped 10,439 children access health services across Northern Virginia
k. In December of 2012, Inova acquired INTotal Health to fulfill a portion of Inova's Vision 2015. As a Managed Care Organization (MCO), INTotal Health specializes in Medicaid services and for the past nine years the health plan has played an important role in helping more than 55,000 members throughout Northern Virginia, Alleghany/Roanoke, Culpeper, Winchester, and far southwestern regions of Virginia.
l. For years the safety net partners, including Inova, have been working closely with the Medical Society of Northern Virginia to establish a network of specialty providers for indigent patients who are in need of these services. The group is working to develop a system that supports the specialists to include transportation for the patients, interpreters when needed and scheduling for the visit. The primary care safety net providers are committed to seeing the patients for follow-up care and labs that don't need a specialist.
m. InovaCares for Seniors is a health plan based on the nationally respected Program of All-Inclusive Care for the Elderly (PACE®) model. This innovative program provides integrated healthcare and social services to seniors in a community-based setting. The goal is to keep seniors healthy and living within their community for as long as possible. InovaCares for Seniors is the first comprehensive, coordinated care program in Northern Virginia preserving the independence of participants in the community.

3. Decrease the prevalence of diet and exercise-related issues, including disparities in diabetes mortality and high rates of overweight/obesity.

a. In 2013 and 2014, Promotores worked with women with gestational diabetes receiving prenatal care at the Inova Cares Clinic for Women. The Promotores were individually matched with patients to provide one-to-one guidance throughout their pregnancy and early infancy stages through telephonic support. Women participating in this program reported gaining knowledge and understanding of their gestational diabetes and how to best manage their diagnosis. In addition, they reported feeling confident about asking questions to medical providers. In response to a question about their confidence level in management of their Gestational Diabetes, 85.42% of the 384 survey responses reported being "very sure" or "sure" they are now able to better self-manage their gestational diabetes. Furthermore, 91.69% out of 385 responses reported being "very comfortable" or "comfortable" in communicating information with their medical provider related to their gestational diabetes.
b. The Inova Center for Wellness and Metabolic Health (ICWMH) provides visits for uninsured, underinsured, and fully insured diabetic patients with an Endocrinologist and a Nurse Practitioner. Services include diabetes classes and individual appointments including Medical Nutrition Therapy visits to help people learn about their diets and how nutrition affects health and wellbeing. From 2013 – 2015, ICWMH provided almost 20,000 patient visits overall. ICWMH tracks patient compliance data, and in 2015, 89 percent of patients met behavioral goals. The success of ICWMH contributes to wellness for diabetic patients and prevents or delays longer term negative and often debilitating effects of diabetes and related chronic diseases. ICWMH continues to be recognized by the American Diabetes Association.
c. To help local residents afford fresh, healthy food, and ultimately reduce the incidence of chronic disease, Inova started its 'SNAP Double Dollars' program in 2011. The program builds on the growing acceptance of SNAP benefits at farmers markets, where fresh, local produce is sold seasonally. Through Inova's program, SNAP recipients are able to double their farmers market purchases, up to $10. During 2013 – 2015, over $16,000 of Inova funds were used for SNAP Double Dollars recipients. Over $8,000 in matching dollars were utilized in Alexandria Community markets. Both the farmers markets and the individuals receiving these matching funds benefit, with community members becoming less food insecure and experiencing enhanced nutrition.
d. The Northern Virginia Healthy Kids Coalition is a community partnership designed to get kids healthy and to fight obesity. The partnership includes area school districts, Inova, and others. The Coalition sponsors and promotes a number of initiatives, including "9-5-2-1-0 For Health" (9 hours of sleep, 5 servings of fruits and vegetables, 2 hours or less of screen time outside of school, 1 hour of physical activity, and 0 sugary beverages).
e. The third annual "Let's Move the Needle on Childhood Obesity" event was held on Sept. 26, 2013. The event was co-sponsored by the Community Foundation for Northern Virginia, and was attended by more than 170 school administrators and teachers, business leaders, government officials and nonprofit leaders. Twenty grants of $1,000 each were awarded in support of school and community based programs in Northern Virginia to encourage more activity and/or better nutrition

for students during the 2013 – 2014 School Year. Awardees included the ACPS - FACE Center and TC Williams High School in Alexandria and Campbell Elementary School in Arlington.

Outside of these priority areas identified in the IAH 2013 CHNA Implementation Plan, the hospital has continued community benefit programs that address a variety of health concerns. Inova operates much of its community health programs centrally, and as a result, many of these programs are not operated directly by IAH.

1. The Office of Health Equity (OHE) identifies and addresses health disparities in northern Virginia through internal and community initiatives. The department is dedicated to the elimination of disparities in the community through community partnership, diversity and cultural competence education, and provision of language services. In support of patient safety and satisfaction, language interpretation and translation services are provided at every Inova facility, to facilitate communication with the 14 percent of Inova's patient population who are limited English proficient (LEP). Medical Interpretation in over 200 languages is provided by on-site medical interpreters and telephonic interpreters. In 2015, Inova delivered 59,048 hours of interpreter services and 13,715 hours of Sign Language interpretation across Inova facilities. Over 572 vital documents were translated into Inova's top languages.

2. The Inova Comprehensive Addiction Treatment Services Program (CATS) is a leader in providing the highest quality addiction treatment services in Northern Virginia and surrounding areas. A series of structured programs offers effective, compassionate treatment for individuals dealing with all forms of substance abuse disorders, including addiction to alcohol, prescription drugs, heroin, cocaine and other drugs. Services are available to adults ages 18 and older. The range of services includes: Inpatient Medical Detoxification, Partial Hospitalization Program, Intensive Outpatient Program, Outpatient Groups, Medication Assisted Therapy and Substance Use Assessments. In 2015, the CATS Inpatient and Partial Hospitalization Program served 7,309 clients and provided 10,867 Intensive Outpatient Services.

3. The mission of Life with Cancer (LWC) is to enhance the quality of life of those individuals in the community affected by cancer. The program addresses the specific needs by providing individual and family counseling, support groups, educational seminars, workshops on cancer diagnosis and treatment, and a full array of complimentary therapies. Life with Cancer is generously supported by our community; therefore all services are available at no charge to residents of the Washington Metropolitan area.

4. Since the 2013 CHNA, Inova Behavioral Health created a new department, Inova Behavioral Health Access Services (IBHAS), which acts as an entry way into all services within Behavioral Health. IBHAS serves as an access point for all of Inova Behavioral Health's inpatient and outpatient programs by providing rapid access to assessments for individuals in need of behavioral health and addiction services. IBHAS includes a Central Access Call Center, Psychiatric Liaison services for patients seen in Inova Emergency

Departments, scheduled Assessment Services for our Partial Hospitalization Program and CATS Intensive Outpatient Programs, and walk-in services through the Inova Psychiatric Assessment Center (IPAC). IPAC provides a unique and valuable resource to our community by offering urgent psychiatric assessments for adults ages 18 and older and referrals to appropriate providers and levels of care.

5. Climate change and the resulting increases in temperature, air pollution and extreme weather events impact the health of our population, particularly the most vulnerable (seniors, children, and lower income).[11,12] Inova is working to mitigate those impacts by reducing energy use in our facilities, offering alternative transportation options to employees, and expanding access to local and sustainable food in our cafeterias.

[11] Watts N, Adgar WN, et al. 2015. Health and climate change: policy responses to protect public health. The Lancet, June 2015.
[12] EPA. 2015. Climate Change in the United States: Benefits of Global Action. United States Environmental Protection Agency, Office of Atmospheric Programs, EPA 430-R-15-001.]