A Community Health Needs Assessment

Prepared for VCU Health Community Memorial Hospital

By Community Health Solutions

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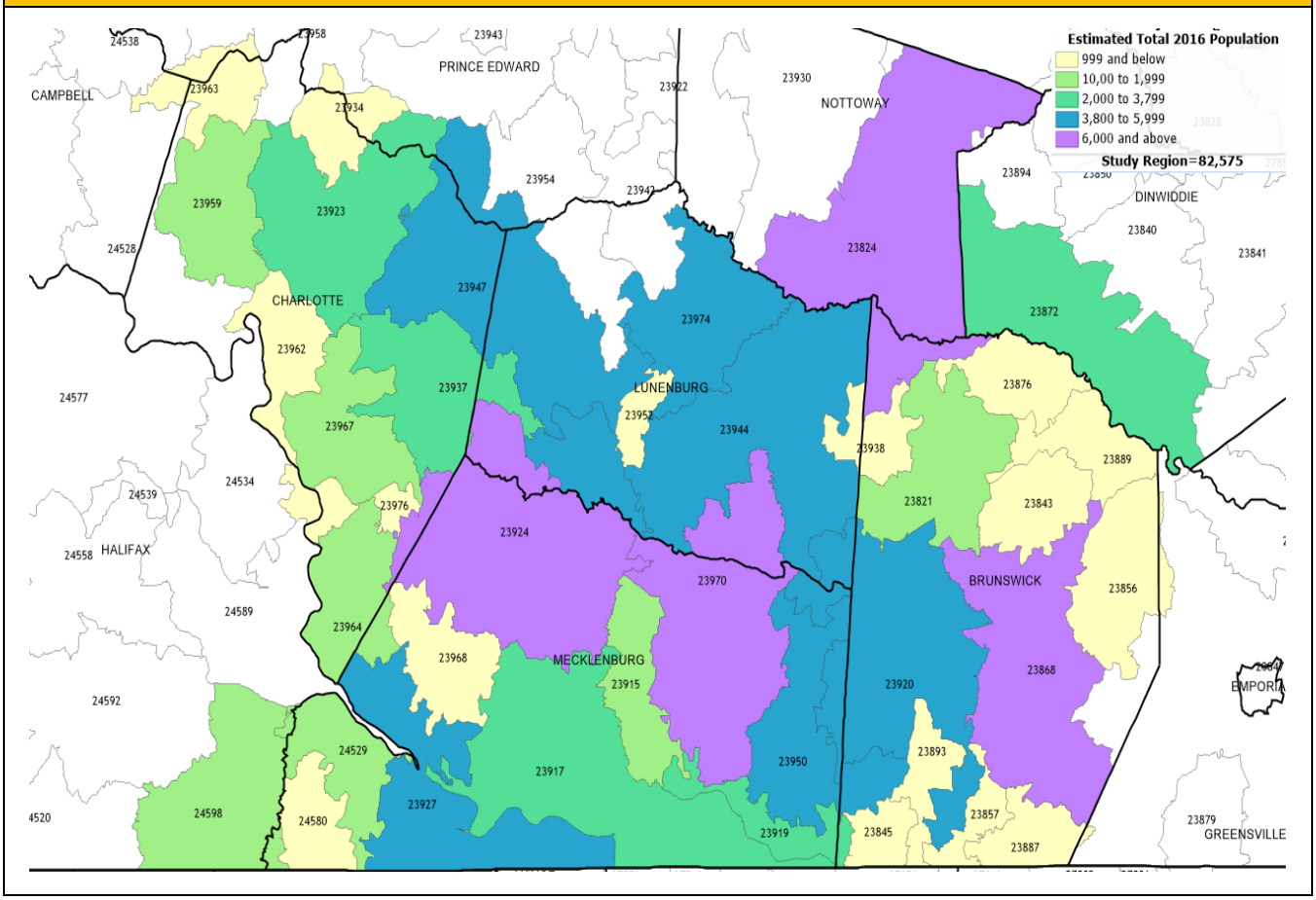
Executive Summary

The mission of VCU Health Community Memorial Hospital (VCU Health CMH) is to "provide excellence in the delivery of health care". With this mission in mind, VCU Health Community Memorial Hospital commissioned Community Health Solutions to conduct this community health needs assessment in 2018.

The study focuses on the VCU Health CMH service area of 38 zip codes, most of which fall within Brunswick, Charlotte, Lunenburg, Mecklenburg and Nottoway counties. The study region is shown in the map below. The results include two primary components: a 'community insight profile' based on qualitative analysis of a survey of community residents or community professionals, and a 'community indicator profile' based on quantitative analysis of community health status indicators. This Executive Summary outlines major findings, and details are provided in the body of the report.

The Study Region



Community Insight Profile

Section I. Insights from Community Residents

Section I of the report describes insights about health in the community from the perspectives of community residents. In an effort to generate community input for the community health needs assessment, a *Community Insight Survey* was conducted with community residents. Insights were collected via surveys administered online and in-person at the hospital. Two hundred and eight community residents submitted a response (although not every respondent answered every question). The respondents provided rich insights about community health in the study region. To summarize:

- **Demographic Profile.** Of the 208 community resident survey respondents; most respondents were white, female, over age 55, middle/upper income level, and living in the South Hill area.

- **Sources of Health Information.** A large majority of respondents (84%) reported they obtain health information from their health care provider, more than half obtain health information from family members and friends, and nearly half obtain health information online.

- **Personal Health Goals.** Community residents were asked to identify have any personal goals for improving your health. The respondents provided several goals to improve their health, most of which include losing weight, increasing physical activity, improving diets and managing healthcare.

- **Neighborhood Health Concerns.** Community residents were asked to review a list of common community health issues, as drawn from the *Healthy People 2020* framework with some refinements. Respondents were asked to identify from the list what they view as important health concerns in their neighborhood. Among the most commonly identified concerns were access to healthy foods; transportation; opportunities to participate in community events and activities for health; spaces for walking; school safety; and water quality.

- **Access to Services.** Community respondents were asked to review a list of health care and community services that may be needed in the community, and to identify those that need improvement. The most commonly mentioned services were affordable health insurance, services for elderly (including assisted living and long term care), weight control services, mental health and after school programs.

- **Awareness of VCU Health Community Memorial Hospital (CMH) Services.** Survey respondents were asked whether they were aware of hospital services offered at VCU Health CMH. Most respondents were aware of all hospital services, with the exception of dental care.

- **Emerging Health Issues.** Community residents were invited to identify emerging health issues that may be on the horizon in their community. A range of health issues were identified in the survey. Among the most commonly identified emerging issues were water/air pollution; opioids/substance use; access to behavioral healthcare; an increasingly aging population; obesity; and chronic disease.

- **Vulnerable Populations.** Community residents were asked to identify populations within their neighborhood who are especially vulnerable/at risk for health problems. The elderly population was mentioned by most respondents. Other vulnerable populations include low income residents; uninsured/underinsured residents; children; and those with challenges accessing healthcare services.

- **Community Assets.** Survey respondents were asked to identify health assets within the community that promote a culture of health. Commonly mentioned community assets included VCU Health CMH; parks and recreational facilities; the natural environment (e.g. lakes); biking and walking trails; healthcare providers; specialty medical services (e.g. new cancer center); community residents and emergency medical services (e.g. local EMS).

- **Defining a Healthy Community.** Community residents were invited to share their definition for “a healthy community”. Respondents defined a healthy community as one with accessible healthcare; physically

active residents; available support services; access to healthy foods; wellness promotion from organizations and residents; good air and water quality; collaboration/support among neighbors; a safe/crime free environment; and accessible transportation.

- **Opportunities for Collaboration.** Community residents were asked to share ideas about how people could work together to promote better health in their neighborhood. A wide range of definitions were provided by the respondents. Collaboration ideas included increased health promotion and communication about services; collaboration across organizations and neighborhoods in the region; more wellness events; increasing resident engagement; expanding services in the region; education programs; support for vulnerable neighbors and creating wellness activity/support groups.

- **Ideas and Suggestions for VCU Health CMH and Partners**. Survey respondents offered open-ended responses with additional ideas and suggestions for how VCU Health CMH and its partners could help the community achieve better health. Commonly mentioned ideas included providing education, prevention and wellness resources; expanding access to current services in other areas of the region; adding medical services and/or providers; collaborating with other local organizations; improving customer service; providing free/low cost healthcare; and participating in community events.

Section II. Insights from Community Professionals

Section II of the report describes insights about health in the community from the perspectives of community professionals. A Community Insight Survey was conducted with a group of community professionals identified by VCU Health Community Memorial Hospital (VCU Health CMH). The survey was administered online (via a survey link). A total of 53 respondents completed the survey (although not every respondent answered every question). To summarize:

- **Organization Affiliation.** The 53 survey respondents represented a wide range of community organizations including public health, private firms, local government and healthcare providers.

- **Health Concerns.** Respondents were asked to review a list of common community health issues, as drawn from the Healthy People 2020 framework with some refinements. Respondents were asked to identify from the list what they view as important health concerns in the community where they live or work. They were also invited to identify additional concerns not already on the list. A wide range of concerns were identified in the survey. Among the most commonly identified concerns were cancer, high blood pressure, heart disease, adult obesity, Alzheimer's Disease, diabetes, tobacco use and dental care/oral health.

- **Service Gaps.** Survey respondents were asked to review a list of community services that are typically important for addressing the health needs of a community. Respondents were asked to identify from the list any services they think need strengthening in terms of availability, access, or quality. Respondents were also invited to identify additional service gaps not already defined on the list. Respondents identified dozens of specific community service gaps, with the most commonly mentioned being behavioral health services; aging services; health care insurance coverage; cancer services; dental care/oral health services for adults; and long term care services.

- **Specialty Medical Care Gaps.** Survey respondents were asked to review a list of medical services that are typically important for addressing specialty health care needs of a community. Dermatology, family practice and geriatrics were among the most frequently mentioned specialty care gaps.

- **Awareness of VCU Health CMH Services.** Survey respondents were asked whether they were aware of hospital services offered at VCU Health CMH. Respondents were aware of many services; however, some respondents were not aware of home health, ENT/Audiology, Pain Management or Dental Care offered at the hospital.

- **Emerging Health Issues.** Community professionals were invited to identify emerging health issues that may be on the horizon in their community. A range of health issues were identified in the survey. The majority of respondents identified substance use (and/or opioids specifically) as an emerging issue.

Additional issues mentioned included cancer; chronic disease (excludes cancer); an increasingly aging population; youth health issues and obesity.

- **Vulnerable Populations, Neighborhoods or Regions.** Community professionals were asked to identify populations, neighborhoods or geographic regions within the community who are especially vulnerable/at risk for health problems. The elderly population was mentioned by most respondents. Other vulnerable populations included low income residents; those with limited access to healthcare; uninsured/underinsured; and those residents with behavioral health conditions. Additionally, respondents identified more rural areas; trailer parks; the Clarksville area; and the county of Brunswick as at-risk. It should be noted that some respondents reported vulnerable populations can be found community-wide.

- **Community Assets.** Survey respondents were asked to identify health assets within the community that promote a culture of health. Commonly mentioned community assets included VCU Health CMH; community resources; healthcare providers; parks and recreational facilities; the natural environment (e.g. lakes); biking and walking trails; and specialty medical services.

- **Defining a Healthy Community.** Community Professionals were invited to share their definition for "a healthy community". Respondents defined a healthy community as one with accessible healthcare; accessible exercise opportunities; accessible health education resources; available support services; an engaged community; and access to healthy foods.

- **Opportunities for Collaboration.** Community Professionals were asked to share ideas about how people could work together to promote better health in their neighborhood. A wide range of definitions were provided by the respondents. Collaboration ideas included increased communication to residents and other organizations about services, collaboration across organizations and neighborhoods in the region; support for vulnerable neighbors; more wellness events; and increasing resident engagement in healthy activities.

- **Ideas and Suggestions.** Survey respondents offered open-ended responses with additional ideas and suggestions for how VCU Health CMH and its partners could help the community achieve better health. Commonly mentioned ideas included adding medical services and/or providers; collaborating with other local organizations; improving customer service; expanding access to current services in other areas of the region; and providing education, prevention and wellness resources.

Section III. Community Indicator Profile

The community indicator profile in Section III presents a wide array of quantitative community health indicators for the study region. To produce the profile, Community Health Solutions analyzed data from multiple sources. By design, the analysis does not include every possible indicator of community health. The analysis is focused on a set of indicators that provide broad insight into community health and for which there were readily available data sources. To summarize:

- **Demographic Profile.** As of 2016, the study region included an estimated 82,575 people. Compared to Virginia as a whole, the study region is more rural, older, and has more Black/African American residents. The study region also had a higher percentage of residents in poverty and adults age 25+ without a high school diploma than Virginia as a whole.

- **Mortality Profile.** The study region had 1,100 total deaths in 2016. The leading causes of death were heart disease (247 deaths), malignant neoplasms (cancer) (238 deaths), and cerebrovascular (stroke) (74 deaths). The death rates (unadjusted for age) in the study region were higher than Virginia overall, and for the leading causes of death where a rate was calculated.

- **Maternal and Infant Health Profile.** The study region had 813 total live births in 2016. Of these, 96 (12%) were born with low birth weight, 159 (20%) were births without early prenatal care, 442 (54%) were non-marital births, and 57 were births to teens with most (46) involving older teens age 18 or 19. Compared to Virginia as a whole, the study region had higher rates of low weight births, births without early prenatal care, non-marital births, and births to teens. The five-year infant mortality rates were higher than the statewide rate for all five

localities. Teen pregnancy rates were also higher than the statewide rate for four of the five counties, the exception being Charlotte County.[1]

- **Preventable Hospitalization Profile.** The Agency for Healthcare Research and Quality (AHRQ) identifies a defined set of conditions (called Prevention Quality Indicators, or 'PQIs') for which hospitalization should be avoidable with proper outpatient health care. High rates of hospitalization for these conditions indicate potential gaps in access to quality outpatient services for community residents. The leading diagnoses for these discharges were congestive heart failure (420), chronic obstructive pulmonary disease (COPD) and asthma in older adults (273), diabetes (171), community-acquired pneumonia (168), and dehydration (160). The PQI discharge rates for the study region were higher than the Virginia statewide rates for PQI diagnoses overall and for all PQI diagnoses where a rate was calculated.

- **Behavioral Health Hospital Discharge Profile.** Behavioral health hospitalizations provide another important indicator of community health status. Residents of the study region had 573 hospital discharges from Virginia community hospitals for behavioral health conditions in 2016. The leading diagnoses for these discharges were major depressive episode, recurring (115); bipolar disorder (83); schizoaffective disorders (69); major depressive episode, single episode (60); and schizophrenia (59). The BH discharge rates for the study region were lower than Virginia statewide rates overall and for most of the leading causes, the exception being a higher rate for schizoaffective disorder.

- **Adult and Youth Health Risk Profiles.** The study includes a set of estimates of adult and child health risk. The local estimates indicate that substantial numbers of adults in the study region may have health risks related to nutrition, physical activity, weight, tobacco, and alcohol. It is also estimated that large numbers of children in the study region are not meeting recommendations for healthy eating, physical activity and healthy weight.

- **Uninsured Profile.** At any specific point in 2016, an estimated 10,520 residents of the study region were uninsured. Among the uninsured, it is estimated that half have family income below 138 percent of the federal poverty level and may be income-eligible for coverage under Virginia's Medicaid expansion (other eligibility factors may apply). and may be eligible for coverage under Virginia's Medicaid expansion. The estimated number of uninsured children age 0-17 was 1,104 in the study region, and the estimated number of uninsured adults age 18-64 was 9,416.

- **Medically Underserved Profile.** Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) are designated by the U.S. Health Resources and Services Administration as being at risk for health care access problems. The designations are based on several factors including primary care provider supply, infant mortality, prevalence of poverty, and the prevalence of seniors age 65+. All five counties that overlap the study region have been designated as MUAs.

Additional Data and Maps

Appendix A provides a set of thematically colored maps displaying variation in community health indicators by zip code. *Appendix B* provides detail on the methods used to produce the indicators. A separate Microsoft Excel file contains a summary of open-end comments for both surveys, and indicators for each zip code within the study region.

[1] Infant mortality and teen pregnancy rates were not calculated for this study region because the study region is defined by zip codes, and available data are not structured to support calculation of rates at the zip code level. City/county level rates are provided as an alternative.

Section I. Insights from Community Residents

In an effort to generate community input for the community health needs assessment, a *Community Insight Survey* was conducted with community residents. Insights were collected via surveys administered online and in-person at the hospital. Two hundred and eight community residents submitted a response (although not every respondent answered every question). The respondents provided rich insights about community health in the study region. Community residents were asked to share their viewpoints on:

- Important health concerns in the community;
- Significant service gaps in the community;
- Awareness of VCU Health CMH hospital services;
- Vulnerable/at-risk populations in the community;
- Emerging health issues in the community;
- The definition of a healthy community;
- Health assets in the community;
- Community collaboration ideas; and
- Additional ideas or suggestions for improving community health.

Please note that the community insights presented in this section represent a summary snapshot of community survey results captured May-June 2018. The survey respondents come from across the region, and they have provided valuable insights from their personal perspectives.

1. Demographic Profile

A demographic profile of the community resident survey respondents is presented in *Exhibit I-1*. As shown:

- All survey respondents were adults age 18 or older, with 39% age 18-54, and 61% age 55 or older.
- Most respondents were female (72%)
- Almost half (47%) of the respondents lived in a household with one other person.
- Most of the survey population reported being in the higher income range, with 62% reporting estimated annual household income above $50,000, and 27% reporting annual household income below $50,000.
- Most respondents were White (93%); other respondents self-reported as Black or African American (6%) or Multi-racial (1%).
- As shown in *Exhibit I-2* on the following page, survey respondents resided in one of 28 zip codes.

Exhibit I-1. Community Resident Survey – Demographic Profile

Age Group	
Total Responses	204
Age 18-24	1%
Age 25-34	11%
Age 35-44	15%
Age 45-54	12%
Age 55-64	20%
Age 65+	41%

Gender	
Total Responses	203
Female	72%
Male	28%

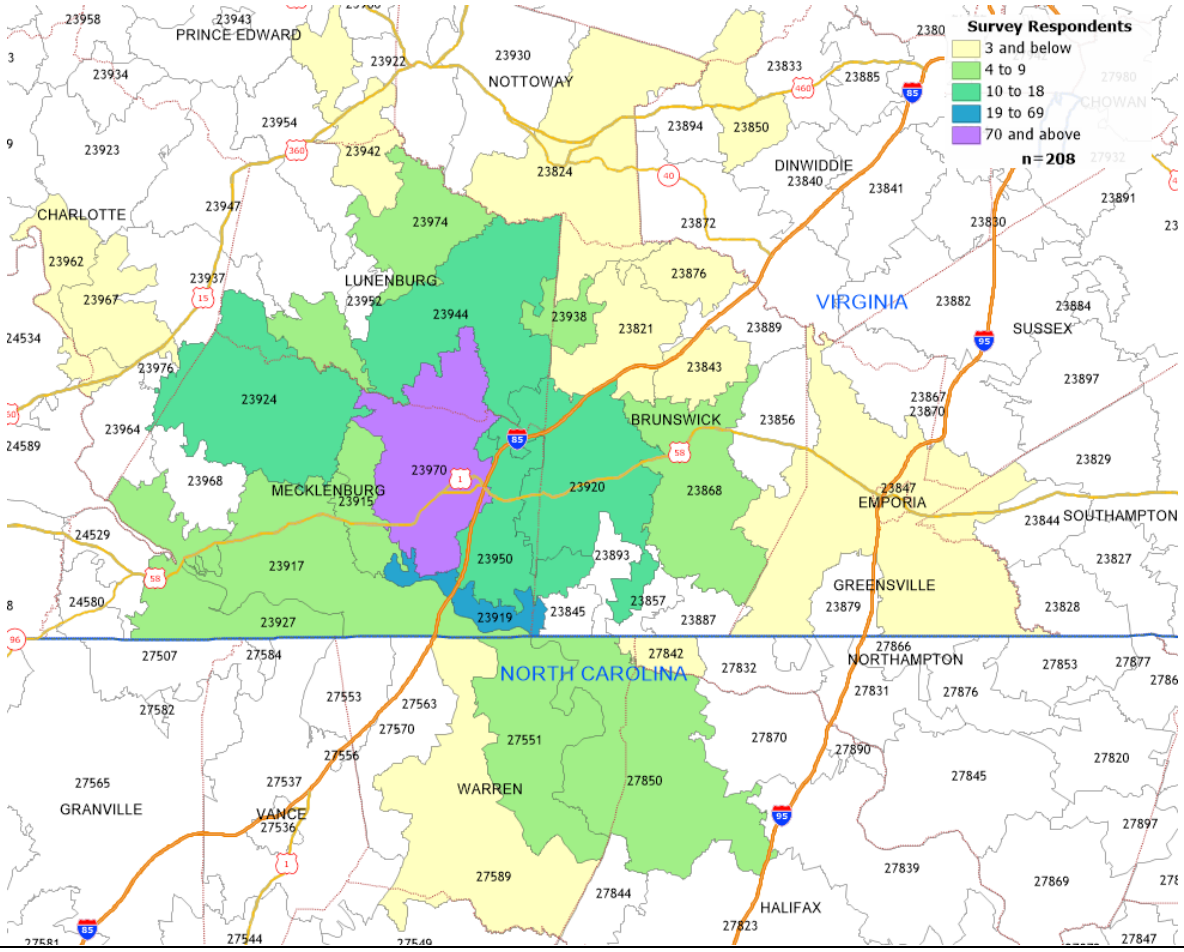
Household Size	
Total Responses	201
One	14%
Two	47%
Three	16%
Four	15%
Five	6%
More than Five	1%

Household Income	
Total Responses	198
Less than $25,000	4%
$25,000-$34,999	10%
$35,000-$49,999	14%
$50,000-$74,999	17%
$75,000 or more	44%
Don't Know/Not Sure	11%

Hispanic Ethnicity	
Total Responses	205
Yes	0%
No	100%

Race	
Total Responses	204
Asian	0%
American Indian or Alaska Native	0%
Black or African American	6%
Multiple Race	1%
Pacific Islander	0%
White	93%

Exhibit I-2. Community Resident Survey – Zip Code of Residence



Zip Code of Residence - Distribution of 208 Respondents

23970 Mecklenburg	36%	27850 Halifax	3%
23919 Mecklenburg	9%	23915 Mecklenburg	2%
23920 Brunswick	7%	23917 Mecklenburg	2%
23944 Lunenburg	6%	23868 Brunswick	2%
23950 Mecklenburg	6%	23927 Mecklenburg	2%
23924 Mecklenburg	5%	27842 Northampton	1%
23974 Lunenburg	4%	23821 Brunswick	1%
23938 Lunenburg	3%	23824 Nottoway	1%
27551 Warren	3%	23847 Greensville	1%
		10 Other Zip Codes	5%

2. Sources of Health Information

Community residents were asked to identify their sources of health information. As shown in *Exhibit 1-3*, a large majority (84%) reported they obtain health information from their health care provider, more than half obtain health information from family members and friends, and nearly half obtain health information online.

Exhibit I-3. Community Resident Survey – Sources of Health Information (n=202)

Source	Response Percent	Response Count
Health care provider (nurse practitioner, physician)	84%	169
Online resources	49%	98
Family Member	29%	58
Friends	23%	47
Local Health Department	4%	9
Faith Based Organization	3%	6
Social Media Resources	3%	6

3. Personal Health Goals

Community residents were asked to identify have any personal goals for improving their health. As shown in *Exhibit I-4*, respondents provided several goals to improve their health, most of which include losing weight, increasing physical activity, improving diets and managing healthcare.

Exhibit I-4. Community Resident Survey – Personal Health Goals (n=201)

Goals	Response Percent	Response Count
Lose/Maintain Weight	36%	73
Stay Active/Exercise	30%	61
Eat Healthier/Diet	16%	33
Manage Chronic Disease	6%	12
Quit Smoking	2%	5
See a Healthcare Provider Regularly	1%	3
Other	7%	14

4. Neighborhood Health Concerns

Community residents were asked to review a list of common community health issues, as drawn from the *Healthy People 2020* framework with some refinements. Respondents were asked to identify from the list what they view as important health concerns in their neighborhood. They were also invited to identify additional concerns not already on the list. As shown in *Exhibit I-4,* a wide range of concerns were identified in the survey. Among the most commonly identified concerns were access to healthy foods; transportation; opportunities to participate in community events and activities for health; spaces for walking; school safety and water quality.

Exhibit I-4. Community Resident Survey-Neighborhood Health Concerns (n=417)

Concerns	Response Percent	Response Count
Access to healthy foods	54%	80
Access to public transportation	38%	56
Opportunities to participate in community events and activities for health	37%	55
Spaces for walking	37%	55
School safety	27%	40
Water quality	26%	38
Crime protection	23%	34
Spaces for biking	22%	33
Access to public parks or playgrounds	22%	32
Healthy messaging in media and public spaces	14%	20
Housing safety	10%	14
Traffic safety	7%	10
Air quality	6%	9

Additional Comments:

- Ban the use of bio-solids as fertilizer.
- Fast help in time of an emergency
- Live in country so many items are not readily available
- No walk-in clinics near us. We travel to Roxboro, NC for a good walk in clinic for minor emergencies. They are efficient, professional and are not expensive. Even though I have Medicare and supplemental insurance, my one trip to the VCU ER in South Hill cost me several hundred dollars out of pocket. I would have preferred to go to a walk-in clinic.
- Not enough available beds in your new hospital. ER constantly going on diversion. heart cath lab that was supposed to be in the new hospital that is not there.
- The growing population of young gang members due to the lack of parental support/the age of gang members joining is getting younger and younger because kids have nothing else to do or find a place where they fit in, they see no future because no one talks to them about their future opportunities.
- The major concern is the continued pressure by moneyed interests to mine uranium upstream in Virginia!
- The water for the town of CLARKSVILLE routinely fails water tests, with the town sending out letters that they “forgot” to provide samples for several years.
- Town water having issues

5. Access to Services

Community respondents were asked to review a list of health care and community services that may be needed in the community, and to identify those that need improvement. As shown in *Exhibit I-5,* the most commonly mentioned services were affordable health insurance, services for elderly (including assisted living and long term care), weight control services, mental health and after school programs.

Exhibit I-5. Community Resident Survey-Access to Services (n=151)

Services	Response Percent	Response Count
Access to affordable health insurance	62%	94
Access to assisted living services	60%	88
Access to services for older adults	57%	83
Access to services for weight control	52%	79
Access to mental health services	51%	77
Access to long term care services	51%	76
Access to after school programs	51%	75
Access to services for children with special needs	45%	65
Access to public transportation	40%	59
Access to services for adults with disabilities	40%	59
Access to child care services	40%	58
Access to primary care services	38%	57
Access to dental services	36%	54
Access to substance abuse services	36%	54
Access to vision services	34%	52
Access to financial and legal counseling services	27%	39
Access to hearing services	25%	37
Access to home health services	22%	33
Access to services for quitting smoking	22%	33
Access to hospital services	16%	24
Access to pharmacy services	15%	22

Additional Comments: [2]

- Access to dermatology and pulmonary services
- Access to exercise services, indoor pool for aerobics, and exercise classes
- Access to recreation activities
- Access to specialized physicians - dermatologist
- Allergy testing
- CMH needs improvement in PCP Offerings
- Dermatology (3)
- Elderly help
- Exercise and weight loss programs
- Exercise programs for older adults
- Go to Exercise Therapy at Leggett Building, but all they do is check blood pressure and oxygen. You don't get any advice. Sometimes and a lot of the times you lose 10 minutes or more of your time while they are talking to blood pressure to start. Why can't you start if you don't have BP issues without waiting?
- Healthcare education provided in Clarksville, maybe at the community center. We also need a dialysis center.
- Independent living communities for senior citizens which are reasonably priced
- Jobs
- Need better and affordable options for seniors (long terms care, nursing homes and assisted living) and options for Veterans. Also, alternative medicine should be embraced - acupuncture, herbalism, alternative medicines
- No walk-in clinics near Clarksville, VA.
- Number of pediatricians
- Pulmonology, Cardiology, Neurology, Rheumatology
- Services for Veterans (2)
- Sitters and CNAs; Why [is] home health is so limited?

[2] A count is provided where respondents provided similar comments. Additionally, some respondents provided multiple comments.

6. Awareness of VCU Health Community Memorial Hospital (VCU Health CMH) Services

Survey respondents were asked whether they were aware of hospital services offered at VCU Health CMH. As shown in *Exhibit I-6*, most respondents were aware of all services, with the exception of dental care.

Exhibit I-6. Community Resident Survey - Awareness of VCU Health CMH Services (n=160)

VCU Health CMH Services	Response Percent	Response Count
Emergency Department	98%	157
Surgical Services	90%	144
Cardiology Services	89%	143
Labor and Delivery	80%	128
Oncology	80%	128
Obstetrics/Gynecology	79%	126
Orthopedics	77%	123
Gastroenterology	76%	122
Urology	76%	122
Hospice	76%	121
Radiation Therapy	75%	120
Pain Management	74%	118
ENT/Audiology	66%	106
Home Health	66%	105
Pediatrics	62%	99
Dental Care	28%	44

Additional Comments: [3]

- Dermatology (9)
- Neurology (4)
- Pulmonology (3)
- Exercise therapy (3)
- Endocrinologist, I have to travel to Duke.
- Endocrinology
- Family practice, allergist
- Healthy cooking classes
- Home health is listed as available, but it is really not available. We also are in need of skilled care/therapy not located in a nursing home.
- I am a member of cardiac rehab (old name) and love it. Get my BP taken twice weekly and machines are first rate!
- Not all services listed above are available locally and a lot of the ones that are take forever to get an appointment for or only have one physician to choose from which leads to no options for a second opinion. A lot of the physicians are close minded and if the patient doesn't fit the exact cookie cutter mold, they dismiss their health concerns as nothing.
- Patient Family Advisory Council
- Educational programs
- Qualifying for home health
- radiation – x-rays, mammograms
- Rather go to Henrico for some of these services. Do not care for the Dr. in charge such as one Dr. only for gastroenterology. I am not the only one that feels this way either
- Since I moved here as an older adult, some of these services, that I checked, I would assume are available at a hospital. I did not know about ENT, Home Health, Hospice and Dental care
- Walk in clinic.

[3] A count is provided where respondents provided similar comments. Additionally, some respondents provided multiple comments.

7. Additional Insights

Survey respondents were invited to provide additional insight in response to six open-ended questions about emerging health issues, vulnerable populations, community health assets, opportunities for collaboration, their vision of a healthy community; and ideas and suggestions for community health improvement. *Exhibit I-7* illustrates the spectrum of insights and issues identified by community residents.

- **Emerging Health Issues.** Community residents were invited to identify emerging health issues that may be on the horizon in their community. Among the most commonly identified emerging issues were water/air pollution; opioids/substance use; access to behavioral healthcare; an increasingly aging population; obesity; and chronic disease.

- **Vulnerable Populations.** Community residents were asked to identify populations within their neighborhood who are especially vulnerable/at risk for health problems. The elderly population was mentioned by most respondents. Other vulnerable populations include low income residents; uninsured/underinsured residents; children; and those with challenges accessing healthcare services.

- **Community Assets.** Survey respondents were asked to identify health assets within the community that promote a culture of health. Commonly mentioned assets included VCU Health CMH; parks and recreational facilities; the natural environment (e.g. lakes); biking and walking trails; healthcare providers; specialty medical services (e.g. new cancer center); community residents and emergency medical services (e.g. local EMS).

- **Defining a Healthy Community.** Community residents were invited to share their definition for “a healthy community”. Respondents described a healthy community as one with accessible healthcare; physically active residents; available support services; access to healthy foods; wellness promotion from organizations and residents; good air and water quality; collaboration/support among neighbors; a safe/crime free environment; and accessible transportation.

- **Opportunities for Collaboration.** Community residents were asked to share ideas about how people could work together to promote better health in their neighborhood. Ideas offered by respondents included increased health promotion and communication about services; collaboration across organizations and neighborhoods in the region; more wellness events; increasing resident engagement; expanding services in the region; education programs; support for vulnerable neighbors and creating wellness activity/support groups.

- **Ideas and Suggestions for VCU Health CMH and Partners.** Survey respondents offered open-ended responses with additional ideas and suggestions for how VCU Health CMH and its partners could help the community achieve better health. Commonly mentioned ideas included providing education, prevention and wellness resources; expanding access to current services in other areas of the region; adding medical services and/or providers; collaborating with other local organizations; improving customer service; providing free/low cost healthcare; and participating in community events.

Exhibit I-7. Community Resident Survey – Additional Insights[4]

Emerging Health Issues (n=42)

Opioid/Substance Use 6	Pollution 6	Access to Behavioral Healthcare 4	Obesity 3	Aging Population 3	Other*

* Chronic Disease (2), Heart Disease (2), Transportation (2)

Vulnerable Populations (n=62)

Elderly 37	Low Income 14	Limited Access to Healthcare 9	Children 5	Uninsured/ Underinsured 5	Other*

* Residents Living with Mental illness/Substance Use (4), Overweight (3), Pollution (2)

Community Assets for Health (n=83)

VCU Health CMH 30	Parks and Recreation 28	Natural Environment 20	Biking and Walking Trails 17	Healthcare Providers 17	Other*

*Faith-based Organizations (3), Availability of Healthy Food (3), Community Organizations (2) and Safe areas (2)

Characteristics of a Healthy Community (n=78)

Accesible Healthcare 26	Physically Active Residents 21	Available Support Services 21	Access to Healthy Foods 20	Wellness Promotion 18	Other*

*Collaborative/Supportive Community (11), Good Air/Water Quality (8), Safe/Crime Free (7), Accessible Transportation (5), Public Transportation (2), Churches (2)

Ideas for Collaboration (n=57)

Wellness Events and Support Groups 15	Increased Health Promotion Communication 14	Collaboration Across Organizations/ Neighborhoods 13	Increase Resident Engagement in Healthy Activities 8	Other*

*Support Vulnerable Neighborhoods (7), Educational Programs (7), Expand Services to More Residents/Locations (7), Add Low Cost Recreational Facilities (3), Increase Access to Healthy Food (3), Improve Enviromental Quality (2) and Increase Access to Healthcare (2)

How VCU Health Community Memorial Hospital and Partners Can Help (n=65)

Provide Education, Prevention, and Wellness Resources 18	Expand Access to Other Areas in the Region 15	Add services/Medical Providers 13	Collaborate with Other Organizations 7	Improve Customer Service 5	Other*

*Provide Low Cost Healthcare (4), Partcipate in Community Events (3)

[4] A count is provided where respondents provided similar comments. Additionally, some respondents provided multiple comments.

Section II. Insights from Community Professionals

This section of the report describes community insights about health in the community from the perspectives of community professionals. A *Community Insight Survey* was conducted with a group of community professionals identified by VCU Health Community Memorial Hospital (VCU Health CMH). The survey was administered online (via a survey link). A total of 53 respondents completed the survey (although not every respondent answered every question). Community professionals were asked to share their viewpoints on:

- Important health concerns in the community;
- Significant service gaps in the community;
- Specialty medical care service gaps in the community;
- Awareness of VCU Health CMH hospital services;
- Vulnerable/at-risk populations and regions in the community;
- Emerging health issues in the community;
- Health assets in the community;
- The definition of a healthy community;
- Community collaboration ideas; and
- Additional ideas or suggestions for improving community health.

Please note that the community insights presented in this section represent a summary snapshot of community survey results captured May-June 2018.

1. Organization Affiliation

Exhibit II-1 below lists the organizational affiliations of the 53 community professional survey respondents.

Exhibit II-1. Community Professional Survey- Reported Organization Affiliation[5]

Acoustic Edge	Pharmacy Associates
AmeriCare Plus	Pucci Consulting
Betsy's Boarding Kennel	REO Realty
Boseman Insurance Agency	Sherry's Sew What?, LLC
Brunswick Chamber of Commerce	South Hill Junior Women's Club
Brunswick County Department of Social Services	South Hill Police Department
Citizens Bank & Trust Company	Southside Community Services Board
CMH Family Care Center	Susan C. Bersch CPA, PLLC
Commonwealth Home Health, Inc./Personal Home Care, Inc.	The Colonial Center of South Hill, LLC
Department for Aging and Rehabilitative Services	The Nutman Company NC LLC
Edward Jones Investments (2)	Touchstone Bank
Eileen M. Dick Consulting	Town of Blackstone
Fairfield Inn & Suites South Hill	Town of South Hill
Farm Bureau	Transamerica Agency Network
Gasburg Golf Cars	VCU Health CMH Home Health and Community Hospice
Glenn E. Barbour P.C.	VCU Health Community Memorial Hospital (6)
Gregory R. Waddell, Attorney at Law	VCU Massey Cancer Center
Jamieson Memorial United Methodist Church	Veterans Enterprise Technology Solutions, Inc
Lake Gaston Gazette-Observer	Virginia Department of Health (2)
Lake Gaston Signs	Virginia Homes Building Systems
Mecklenburg County	Virginia Welcome Center
Mecklenburg County Health Department	Warren County Government
Nature Graphics, LLC	*Unknown Organization (1)*

[5] *A count is provided for organizations with multiple survey respondents. One respondent represented more than one organization.*

2. Community Health Concerns

Survey respondents were asked to review a list of common community health issues, as drawn from the *Healthy People 2020* framework with some refinements. Respondents were asked to identify from the list what they view as important health concerns in the community where they live or work. They were also invited to identify additional concerns not already on the list. As shown in *Exhibit II-2,* a wide range of concerns were identified in the survey. Among the most commonly identified concerns were cancer, high blood pressure, heart disease, adult obesity, Alzheimer's Disease, diabetes, tobacco use and dental care/oral health.

Exhibit II-2. Community Professional Survey-Community Health Concerns (n=53)

Concerns	Response Percent	Response Count
Cancer	83%	44
High Blood Pressure	72%	38
Heart Disease	68%	36
Adult Obesity	66%	35
Alzheimer's Disease	66%	35
Diabetes	64%	34
Tobacco Use	55%	29
Dental Care/Oral Health-Adult	51%	27
Stroke	49%	26
Mental Health Conditions (other than depression)	42%	22
Substance Abuse - Illegal Drugs	42%	22
Alcohol Use	38%	20
Childhood Obesity	38%	20
Dental Care/Oral Health-Pediatric	38%	20
Prenatal & Pregnancy Care	38%	20
Arthritis	36%	19
Chronic Pain	36%	19
Depression	36%	19
Infant and Child Health	36%	19
Orthopedic Problems	34%	18
Substance Abuse - Prescription Drugs	34%	18
Renal (kidney) Disease	28%	15
Respiratory Diseases (other than asthma)	28%	15
Injuries	25%	13
Physical Disabilities	25%	13
Asthma	19%	10
Autism	15%	8
Infectious Diseases	15%	8
Teen Pregnancy	15%	8
Domestic Violence	13%	7
Neurological Disorders (seizures, multiple sclerosis)	13%	7
Intellectual/Developmental Disabilities	11%	6
Environmental Quality	9%	5
Sexually Transmitted Diseases	8%	4
HIV/AIDS	0%	0

Exhibit II-2. Community Professional Survey-Community Health Concerns (n=53)

Additional Comments:

- 24 Hour Urgent Care Facility
- Chronic migraine treatment
- Gastrointestinal health (Ulcers, Acid Reflux, Fructose/Gluten/Lactose intolerance, general dietary and nutritional guidance)
- Lupus
- Nutritional education

3. Community Service Gaps

Survey respondents were asked to review a list of community services that are typically important for addressing the health needs of a community. Respondents were asked to identify from the list any services they think need strengthening in terms of availability, access, or quality. Respondents were also invited to identify additional service gaps not already defined on the list. As shown in *Exhibit II-3*, respondents identified dozens of specific community service gaps, with the most commonly mentioned being behavioral health services; aging services; health care insurance coverage; cancer services; dental care/oral health services for adults; and long term care services.

Exhibit II-3. Community Professional Survey-Community Service Gaps (n=52)

Services	Response Percent	Response Count
Behavioral Health Services (including mental health, substance abuse and intellectual disability)	65%	34
Aging Services	63%	33
Health Care Insurance Coverage (private and government)	63%	33
Cancer Services (screening, diagnosis, treatment)	54%	28
Dental Care/Oral Health Services-Adult	50%	26
Long Term Care Services	50%	26
Health Care Services for the Uninsured and Underinsured	46%	24
Transportation	44%	23
Dental Care/Oral Health Services-Pediatric	40%	21
Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	40%	21
Chronic Pain Management Services	38%	20
Primary Health Care Services	38%	20
Health Promotion and Prevention Services	37%	19
Chronic Disease Services (including screening and early detection)	35%	18
Job/Vocational Retraining	35%	18
Home Health Services	33%	17
Food Safety Net (food bank, community gardens)	31%	16
Patient Self-Management Services (e.g. nutrition, exercise, taking medications)	31%	16
Physical Rehabilitation	29%	15
Hospice Services	23%	12
Early Intervention Services for Children	21%	11
Hospital Services (including emergency, inpatient and outpatient)	21%	11
Maternal, Infant & Child Health Services	15%	8
Pharmacy Services	15%	8
Social Services	15%	8
Family Planning Services	13%	7
Public Health Services	13%	7
School Health Services	13%	7
Domestic Violence Services	12%	6
Homeless Services	12%	6
Environmental Health Services	10%	5
Workplace Health and Safety Services	6%	3

Exhibit II-3. Community Professional Survey-Community Service Gaps (n=52)

Additional Comments:

- Along the lines of job/vocational retraining, we see a huge need for workforce training and certification of CNAs.
- Many items [see above] selected because hospitals are18 to 20 miles away in either direction from the center of the county and the lack of transportation plus the high patient to doctor ratio with in the county.
- Need more availability to gastroenterologist services. Faster service and more options.
- Need more family care doctors
- Need urgent care facility at the Lake
- Orthopedic Services need desperate attention. Having suffered an injury last year which required orthopedic services locally, I was utterly dissatisfied with the current Orthopedic Services. From lack of hygiene in the old facility to the complete lack of services available and the difficulty in scheduling, to the attitudes of the service providers and office staff - it was made abundantly clear that the patients were not of great concern. The doctors and PAs were using non-sterile equipment during examinations and were not open to listening to my concerns about this. They also refused to believe me about my pain levels and did not offer any suggestions as to how to relieve the pain. No recommendations for physical rehabilitation were given until AFTER I had to have surgery to correct an issue which was not the original cause of my visits to the facility.
- Unless you can match the quality of the care in Raleigh at Wake Med, Duke and UNC, you will have to gage your investment carefully, as most of the retirees here will go for the best care, not the closest; the exception might be for nursing home care. There is none here, and there are 8,000 potential patients here over time that will need that care. If it doesn't exist, people will leave, and a younger cohort will buy the cabin and the cycle repeats.

4. Specialty Medical Care Gaps

Survey respondents were asked to review a list of medical services that are typically important for addressing specialty health care needs of a community. Respondents were asked to identify from the list any specialty medical services they think need strengthening in terms of availability, access, or quality. Respondents were also invited to identify additional service gaps not already defined on the list. *Exhibit II-4* summarizes the results, including open-ended responses. Dermatology, family practice and geriatrics were the most frequently mentioned specialty care gaps.

Exhibit II-4. Community Professional Survey-Specialty Medical Care Service Gaps (n=49)

Specialty Care Services	Response Percent	Response Count
Dermatologists	63%	31
Family Practice Physicians	57%	28
Geriatricians	57%	28
Cardiologists	47%	23
Oncologists	41%	20
Pediatricians	39%	19
Urologists	35%	17

Additional Comments: [6]

- All. There are no specialty services within the borders of Brunswick County. The County health rankings from RWJF show Brunswick among the worst in both health factors and outcomes in the Commonwealth. This applies to the answers to all the above questions. Lack of doctors, lack of transportation, patient/doctor ratios.
- Diabetic specialist
- Gastroenterologists (3)
- Intensive Care Physicians
- Neurology (2)
- Nurses
- OB/GYN
- Oral health-dentists and orthodontal (2)
- Orthopedists (2)
- Physical Therapy
- Podiatry
- Psychology/Psychiatry (2)
- Pulmonology/ Pulmonary rehab
- Rheumatologists (2)
- Surgeons (good ones) orthopedic, OB/GYN, heart. They don't exist here or in the region.
- We do not have enough PCP'S, Internal medicine or pediatricians. We need a dermatologist that comes to our area. We need a pharmacy available for patient prescriptions 24 hours a day. We need a fast track clinic.

[6] A count is provided where respondents provided similar comments. Additionally, some respondents provided multiple comments.

5. Awareness of VCU Health Community Memorial Hospital (VCU Health CMH) Services

Survey respondents were asked whether they were aware of hospital services offered at VCU CMH. As shown in *Exhibit II-5*, respondents were aware of many services; however, some respondents were not aware of home health, ENT/Audiology, Pain Management or Dental Care offered at the hospital.

Exhibit II-5. Community Professional Survey-Awareness of VCU Health CMH Services (n=47)

VCU Health CMH Services	Response Percent	Response Count
Emergency Department	94%	44
Cardiology Services	83%	39
Oncology	70%	33
Surgical Services	70%	33
Obstetrics/Gynecology	68%	32
Gastroenterology	66%	31
Labor and Delivery	66%	31
Orthopedics	64%	30
Radiation Therapy	64%	30
Hospice	60%	28
Urology	55%	26
Pediatrics	53%	25
Home Health	47%	22
ENT/Audiology	43%	20
Pain Management	40%	19
Dental Care	23%	11

Additional Comments:

- A VCU/CMH office in the heart of Brunswick (Lawrenceville) would be a huge asset to the County, and I feel to VCU. A facility where the specialty doctors could come on a rotating basis perhaps.
- None of these services are offered in my immediate living area.

6. Additional Insights

Survey respondents were invited to provide additional insight in response to seven open-ended questions about emerging health issues; vulnerable populations, neighborhoods, or regions; community health assets; opportunities for collaboration; and vision of a healthy community. *Exhibit II-6* on the following pages represents the spectrum of topics from hundreds received.

- **Emerging Health Issues.** Community professionals were invited to identify emerging health issues that may be on the horizon in their community. A range of health issues were identified in the survey. The majority of respondents identified substance use (and/or opioids specifically) as an emerging issue. Additional issues mentioned included cancer; chronic disease (excludes cancer); an increasingly aging population; youth health issues and obesity.

- **Vulnerable Populations, Neighborhoods or Regions.** Community professionals were asked to identify populations, neighborhoods or geographic regions within the community who are especially vulnerable/at risk for health problems. The elderly population was mentioned by most respondents. Other vulnerable populations included low income residents; those with limited access to healthcare; uninsured/underinsured; and those residents with behavioral health conditions. Additionally, respondents identified more rural areas; trailer parks; the Clarksville area; and the county of Brunswick as at-risk. It should be noted that some respondents reported vulnerable populations can be found community-wide.

- **Community Assets.** Survey respondents were asked to identify health assets within the community that promote a culture of health. Commonly mentioned community assets included VCU Health CMH; community resources; healthcare providers; parks and recreational facilities; the natural environment (e.g. lakes); biking and walking trails; and specialty medical services.

- **Defining a Healthy Community.** Community Professionals were invited to share their definition for “a healthy community”. Respondents defined a healthy community as one with accessible healthcare; accessible exercise opportunities; accessible health education resources; available support services; an engaged community; and access to healthy foods.

- **Opportunities for Collaboration.** Community Professionals were asked to share ideas about how people could work together to promote better health in their neighborhood. A wide range of definitions were provided by the respondents. Collaboration ideas included increased communication to residents and other organizations about services, collaboration across organizations and neighborhoods in the region; support for vulnerable neighbors; more wellness events; and increasing resident engagement in healthy activities.

- **Ideas and Suggestions for VCU Health CMH and Partners.** Survey respondents offered open-ended responses with additional ideas and suggestions for how VCU Health CMH and its partners could help the community achieve better health. Commonly mentioned ideas included adding medical services and/or providers; collaborating with other local organizations; improving customer service; expanding access to current services in other areas of the region; and providing education, prevention and wellness resources.

Exhibit II-6. Community Professional Survey – Additional Insights[7]

Emerging Health Issues (n=23)

Opioids/Substance Use 12	Cancer 3	Aging Population 2	Alzheimers 2	Chronic Diesease 2	Obesity 2	Youth Health 2

Vulnerable Populations (n=34)

Elderly 15	Low Income 12	Limited Access to Healthcare 6	Uninsured/ Underinsured 4	Mentally Ill 4

Vulnerable Neighborhoods or Geographic Regions (n=24)

Community Wide 4	Brunswick 4	Clarksville 2	Trailer Parks 2	Rural Areas 2	*Other

*Low Income (1), Hispanic Population (1), Population Over Age 60 (1), West End of the County (1)

Community Assets for Health (n=27)

VCU Health CMH 15	Community Resources 8	Healthcare Providers 7	Parks and Recreational Facilities 6	Other*

*Biking and Walking Trails (4), Natural Environment (4), Specialty Medical Services (4), Community Residents (2)

Characteristics of a Healthy Community (n=30)

Access to Healthcare 17	Access to Exercise 9	Access to Health Education 8	Community Engagement 8	Access to Supportive Services 7	Access to Healthy Food 6

Ideas for Collaboration (n=57)

Increased Communication 8	Collaboration Across Organizations/ Neighborhoods 7	Support Vulnerable Neighborhoods 6	Educational Programs 6	Wellness Events and Support Groups 6	Other*

*Expand Services to More Residents/Locations (5), Increase Resident Engagement in Healthy Activities (4)

How VCU Health Community Memorial Hospital and Partners Can Help (n=19)

Add Services/Medical Providers 8	Collaborate with Other Organizations 4	Expand Access to Other Areas in the Region 3	Improve Customer Service 3	Education, Prevention, and Wellness Resources 2	Other*

* Chronic Disease (2), Heart Disease (2), Transportation (2)

[7] A count is provided where respondents provided similar comments. Additionally, some respondents provided multiple comments.

Section III. Community Indicator Profile

This section of the report provides a quantitative profile of the study region based on a wide array of community health indicators. To produce the profile, Community Health Solutions analyzed data from multiple sources. By design, the analysis does not include every possible indicator of community health. The analysis is focused on a set of indicators that provide broad insight into community health and for which there were readily available data sources.

The results of this profile can be used to evaluate community health status compared to the Commonwealth of Virginia overall. The results can also be helpful for determining the number of people affected by specific health concerns. In addition, the results can be used alongside the survey results and the zip code level maps to help inform action plans for community health improvement. This section includes nine profiles as follows:

1. Health Demographic Snapshot
2. Mortality Profile
3. Maternal and Infant Health Profile
4. Preventable Hospitalization Profile
5. Behavioral Health Hospital Discharge Profile
6. Adult Health Risk Factor Profile
7. Youth Health Risk Factor Profile
8. Uninsured Profile
9. Medically Underserved Profile

1. Health Demographic Snapshot

Community health is driven in part by community demographics. The age, sex, race, ethnicity, income and education status of a population are strong predictors of community health status and community health needs.

Exhibit III-1 presents a snapshot of key health-related demographics of the study region. As of 2016, the study region included an estimated 82,575 people. As illustrated by the population rates shown in the lower part of the Exhibit, compared to Virginia as a whole, the study region is more rural, older, and has more Black/African American residents. The study region also had a higher percentage of residents in poverty and adults age 25+ without a high school diploma than Virginia as a whole.

Exhibit III-1.
Health Demographic Snapshot Profile, 2016

Indicator		Study Region	Virginia
Population Counts			
Total Population	Population	82,575	8,310,301
Age	Children Age 0-17	15,876	1,865,556
	Adults Age 18-29	11,297	1,404,168
	Adults Age 30-44	13,932	1,669,062
	Adults Age 45-64	23,997	2,226,698
	Seniors Age 65+	17,473	1,144,817
Sex	Female	41,016	4,224,018
	Male	41,559	4,086,283
Race	Asian	516	502,878
	Black/African American	31,420	1,596,352
	White	48,550	5,712,958
	Other or Multi-Race	2,089	498,113
Ethnicity	Hispanic Ethnicity[8]	2,068	725,092
Income	Estimated Total Population in Poverty[9]	15,121	921,664
Education	Population Age 25+ Without a High School Diploma	11,397	638,662
Population Rates			
Total Population	Population Density (pop. per sq. mile)	33.9	206.8
Age	Children Age 0-17 pct. of Total Pop.	19%	22%
	Adults Age 18-29 pct. of Total Pop.	14%	17%
	Adults Age 30-44 pct. of Total Pop.	17%	20%
	Adults Age 45-64 pct. of Total Pop.	29%	27%
	Seniors Age 65+ pct. of Total Pop.	21%	14%
Sex	Female pct. of Total Pop.	50%	51%
	Male pct. of Total Pop.	50%	49%
Race	Asian pct. of Total Pop.	1%	6%
	Black/African American pct. of Total Pop.	38%	19%
	White pct. of Total Pop.	59%	69%
	Other or Multi-Race pct. of Total Pop.	3%	6%
Ethnicity	Hispanic Ethnicity pct. of Total Pop.	3%	9%
Income	Population in Poverty pct. of Total Noninitialized Population	19%	11%
Education	Pop. Age 25+ Without a High School Diploma pct. of Total Pop. Age 25+	20%	11%

Source: Community Health Solutions analysis of local demographic estimates from US Census Bureau.
See Appendix B: Data Sources for details.

[8] Classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.
[9] Based on the civilian, noninstitutionalized population of 77,899.

2. Mortality Profile

Mortality is one of the most commonly cited community health indicators. As shown in *Exhibit III-2*, the study region had 1,100 total deaths in 2016. The leading causes of death were heart disease (247 deaths), malignant neoplasms (cancer) (238 deaths), and cerebrovascular (stroke) (74 deaths). The death rates (unadjusted for age) in the study region were higher than Virginia overall, and for the leading causes of death where a rate was calculated. *Note: Maps in Appendix A show the geographic distribution of key death indicators by zip code.*

Exhibit III-2.
Mortality Profile, 2016

Indicator	Study Region	Virginia
Total Deaths	**Count (Percent of Total)**	
Deaths by All Causes	1,100	66,259
Deaths by Top 13 Causes		
Heart Disease, Deaths	247 (22%)	13,441 (20%)
Malignant Neoplasms, Deaths	238 (22%)	14,667 (22%)
Cerebrovascular Diseases, Deaths	74 (7%)	3,415 (5%)
Diabetes Mellitus, Deaths	48 (4%)	2,028 (3%)
Unintentional Injury, Deaths	44 (4%)	3,171 (5%)
Chronic Lower Respiratory Diseases, Deaths	41 (4%)	3,177 (5%)
Alzheimer's Disease, Deaths	30 (3%)	2,387 (4%)
Nephritis and Nephrosis, Deaths	30 (3%)	1,509 (2%)
Primary Hypertension and Renal Disease, Deaths	30 (3%)	678 (1%)
Influenza and Pneumonia, Deaths	18 (2%)	1,10 (2%)
Chronic Liver Disease, Deaths	15 (1%)	855 (1%)
Suicide, Deaths	15 (1%)	1,135 (2%)
Septicemia, Deaths	12 (1%)	1,186 (2%)
Crude Rate per 100,000 Population[10]		
Total Deaths	1,332.1	797.3
Heart Disease, Deaths	299.1	161.7
Malignant Neoplasms, Deaths	288.2	176.5
Cerebrovascular Diseases, Deaths	89.6	41.1
Diabetes Mellitus, Deaths	58.1	24.4
Unintentional Injury, Deaths	53.3	38.2
Chronic Lower Respiratory Diseases, Deaths	49.7	38.2
Alzheimer's Disease, Deaths	36.3	28.7
Nephritis and Nephrosis, Deaths	36.3	18.2
Primary Hypertension and Renal Disease, Deaths	36.3	8.2
Influenza and Pneumonia, Deaths	--	13.4
Chronic Liver Disease, Deaths	--	10.3
Suicide, Deaths	--	13.7
Septicemia, Deaths	--	14.3

Source: Community Health Solutions analysis of death data from the Virginia Department of Health and local demographic estimates from US Census Bureau. See Appendix B. Data Sources for details.

[10] -- Rates are not calculated where the number of deaths is less than 30. Age-adjusted death rates were not calculated for this study because the study region is defined by zip codes, and available data are not structured to support calculation of age-adjusted death rates at the zip code level. A crude rate is provided as an alternative.

3. Maternal and Infant Health Profile

As shown in *Exhibit III-3A,* the study region had 813 total live births in 2016. Of these, 96 (12%) were born with low birth weight, 159 (20%) were births without early prenatal care, 442 (54%) were non-marital births, and 57 were births to teens with most (46) involving older teens age 18 or 19. Compared to Virginia as a whole, the study region had higher rates of low weight births, births without early prenatal care, non-marital births, and births to teens. *Note: Maps in Appendix A show the geographic distribution of key birth indicators by zip code.*

Exhibit III-3A.
Maternal and Infant Health Profile, 2016

Indicators	Study Region	Virginia
Counts		
Total Live Births	813	102,243
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	96	8,266
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks)	159	15,741
Non-Marital Births	442	34,794
Live Births to Teens Age 10-19	57	4,140
Live Births to Teens Age 18-19	46	3,134
Live Births to Teens Age 15-17	11	961
Live Births to Teens Age <15	0	45
Rates[11]		
Live Birth Rate per 1,000 Population	9.8	12.3
Low Weight Births pct. of Total Live Births	12%	8%
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks) pct. of Total Live Births	20%	15%
Non-Marital Births pct. of Total Live Births	54%	34%
Live Births to Teens Age 10-19 Rate per 1,000 females age 10-19	12.4	7.9
Live Births to Teens Age 18-19 Rate per 1,000 females age 18-19	49.7	28.6
Live Births to Teens Age 15-17 Rate per 1,000 females age 15-17	8.0	6.2
Live Births to Teens Age <15 Rate per 1,000 females age <15	0.0	0.2

Source: Community Health Solutions analysis of birth data from the Virginia Department of Health and local demographic estimates from US Census Bureau. See Appendix B. Data Sources for details.

For technical reasons, it was not possible to calculate teen pregnancy rates or five-year infant mortality rates at the zip code level.[12] As an approximation, *Exhibit III-3B* on the following page shows counts and rates of infant mortality and teen pregnancy for the five counties that overlap the study region. The five-year infant mortality rates were higher than the statewide rate for all five localities. Teen pregnancy rates were also higher than the statewide rate for four of the five counties, the exception being Charlotte County.

[11] -- Rates are not calculated where the count is less than 30.
[12] Infant mortality and teen pregnancy rates were not calculated for this study region because the study region is defined by zip codes, and available data are not structured to support calculation of rates at the zip code level. City/county level rates are provided as an alternative.

Exhibit III-3B.
Infant Mortality and Teen Pregnancy, 2016

Indicators	Virginia	Brunswick County	Charlotte County	Lunenburg County	Mecklenburg County	Nottoway County
Counts						
Total Infant Deaths (2016)	593	1	1	1	3	0
Total Teenage (age 10-19) Pregnancies (2016)	5,629	18	6	11	24	15
Rates						
Five-Year Average Infant Mortality Rate per 1,000 Live Births (2012-2016)	5.9	7.0	11.3	7.0	11.0	10.6
Teenage (age 10-19) Pregnancy Rate per 1,000 Teenage Female Population Age 10-19 (2016)	10.8	23.3	8.4	17.4	14.2	18.7

Source: Community Health Solutions analysis of birth data from the Virginia Department of Health.
See Appendix B. Data Sources for details.

4. Preventable Hospitalization Discharge Profile

The Agency for Healthcare Research and Quality (AHRQ) identifies a defined set of conditions (called Prevention Quality Indicators, or 'PQIs') for which hospitalization should be avoidable with proper outpatient health care.[13] High rates of hospitalization for these conditions indicate potential gaps in access to quality outpatient services for community residents.

As shown in *Exhibit III-4*, residents of the study region had 1,340 PQI hospital discharges in 2016.[14] The leading diagnoses for these discharges were congestive heart failure (420), chronic obstructive pulmonary disease (COPD) and asthma in older adults (273), diabetes (171), community-acquired pneumonia (168), and dehydration (160). The PQI discharge rates for the study region were higher than the Virginia statewide rates for PQI diagnoses overall and for all PQI diagnoses where a rate was calculated. *Note: A map in Appendix A shows the geographic distribution of total PQI discharges by zip code.*

Exhibit III-4.
Prevention Quality Indicator (PQI) Hospital Discharge Profile, 2016

Indicator	Study Region	Virginia
Total PQI Discharges	**Count (Percent of Total)**	
Total PQI Discharges by All Diagnoses	1,340	72,694
PQI Discharges by Diagnosis		
Congestive Heart Failure, PQI Discharges	420 (31%)	21,678 (30%)
COPD or Asthma In Older Adults, PQI Discharges	273 (20%)	13,161 (18%)
Dehydration, PQI Discharges	171 (13%)	8,353 (11%)
Community Acquired Pneumonia, PQI Discharges	168 (13%)	9,277 (13%)
Diabetes, PQI Discharges	160 (12%)	9,645 (13%)
Urinary Tract Infection, PQI Discharges	101 (8%)	7,498 (10%)
Hypertension, PQI Discharges	36 (3%)	2,450 (3%)
Perforated Appendix, PQI Discharges	13 (1%)	1,186 (2%)
Asthma in Younger Adults, PQI Discharges	11 (1%)	644 (1%)
Rates-Per 100,000 Population[15]		
Total Prevention Quality Indicator (PQI) Discharges	1,622.8	874.7
Congestive Heart Failure, PQI Discharges	508.6	260.9
COPD or Asthma In Older Adults, PQI Discharges	330.6	158.4
Dehydration, PQI Discharges	207.1	100.5
Community Acquired Pneumonia, PQI Discharges	203.5	111.6
Diabetes, PQI Discharges	193.8	116.1
Urinary Tract Infection, PQI Discharges	122.3	90.2
Hypertension, PQI Discharges	43.6	29.5
Perforated Appendix, PQI Discharges	--	14.3
Asthma in Younger Adults, PQI Discharges	--	7.7

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc. and local demographic estimates from US Census Bureau. See Appendix B: Data Sources for details.

[13] The PQI definitions are detailed in their specification of ICD-9 diagnosis codes and procedure codes. Not every hospital admission for congestive heart failure, bacterial pneumonia, etc. is included in the PQI definition; only those meeting the detailed specifications. Low birth weight is one of the PQI indicators, but for the purpose of this report, low birth weight is included in the Maternal and Infant Health Profile. Also, there are four diabetes-related PQI indicators which have been combined into one for the report. For more information, visit the AHRQ website at www.qualityindicators.ahrq.gov/pqi_overview.htm

[14] Data include discharges for Virginia residents from Virginia community hospitals reporting to Virginia Health Information, Inc. These data do not include discharges from state behavioral health facilities or federal (military) facilities. Data reported are based on the primary diagnosis.

[15] -- Rates are not calculated where the number of PQI discharges is less than 30. Age-adjusted rates were not calculated for this study because the study region is defined by zip codes, and available data are not structured to support calculation of age-adjusted rates at the zip code level, a crude rate is provided as an alternative.

5. Behavioral Health Hospitalization Discharge Profile

Behavioral health (BH) hospitalizations provide another important indicator of community health status. As shown in *Exhibit III-5,* residents of the study region had 573 hospital discharges from Virginia community hospitals for behavioral health conditions in 2016.[16] The leading diagnoses for these discharges were major depressive episode, recurring (115); bipolar disorder (83); schizoaffective disorders (69); major depressive episode, single episode (60); and schizophrenia (59). The BH discharge rates for the study region were lower than Virginia statewide rates overall and for most of the leading causes, the exception being a higher rate for schizoaffective disorder. *Note: A map in Appendix A shows the geographic distribution of Total BH discharges by zip code.*

Exhibit III-5.
Behavioral Health Hospital Discharge Profile, 2016

Indicator	Study Region	Virginia
BH Discharges	**Count (Percent of Total)**	
Total BH Discharges by All Diagnoses	573	66,294
BH Discharges by Diagnosis		
Major depressive disorder, recurrent, BH Discharges	115 (20%)	13,619 (21%)
Bipolar disorder, BH Discharges	83 (14%)	10,315 (16%)
Schizoaffective disorders, BH Discharges	69 (12%)	6,267 (9%)
Major depressive disorder, single episode, BH Discharges	60 (10%)	6,839 (10%)
Schizophrenia, BH Discharges	59 (10%)	3,545 (5%)
Alcohol related disorders, BH Discharges	57 (10%)	8,146 (12%)
Unspecified mood [affective] disorder, BH Discharges	33 (6%)	4,348 (7%)
Unspecified psychosis not due to a substance or known physiological condition,	22 (4%)	1,411 (2%)
Reaction to severe stress, and adjustment disorders, BH Discharges	18 (3%)	2,848 (4%)
Opioid related disorders, BH Discharges	11 (2%)	1,839 (3%)
Persistent mood [affective] disorders, BH Discharges	9 (2%)	1,159 (2%)
Other anxiety disorders, BH Discharges	5 (1%)	700 (1%)
Unspecified dementia, BH Discharges	5 (1%)	700 (1%)
Other psychoactive substance related disorders, BH Discharges	4 (1%)	782 (1%)
Rates-Per 100,000 Population[17]		
Total Behavioral Health (BH) Discharges	693.9	797.7
Major depressive disorder, recurrent, BH Discharges	139.3	163.9
Bipolar disorder, BH Discharges	100.5	124.1
Schizoaffective disorders, BH Discharges	83.6	75.4
Major depressive disorder, single episode, BH Discharges	72.7	82.3
Schizophrenia, BH Discharges	71.5	42.7
Alcohol related disorders, BH Discharges	69.0	98.0
Unspecified mood [affective] disorder, BH Discharges	40.0	52.3
Unspecified psychosis not due to a substance or known physiological condition,	--	17.0
Reaction to severe stress, and adjustment disorders, BH Discharges	--	34.3
Opioid related disorders, BH Discharges	--	22.1
Persistent mood [affective] disorders, BH Discharges	--	13.9
Other anxiety disorders, BH Discharges	--	8.4
Unspecified dementia, BH Discharges	--	8.4
Other psychoactive substance related disorders, BH Discharges	--	9.4

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc. and local demographic estimates from US Census Bureau. See Appendix B: Data Sources for details.

[16] Data include discharges for Virginia residents from Virginia community hospitals reporting to Virginia Health Information, Inc. These data do not include discharges from state behavioral health facilities or federal (military) facilities. Data reported are based on the primary diagnosis.
[17] --Rates are not calculated where the number of discharges is less than 30.

6. Adult Health Risk Factor Profile

This profile presents indicators of adult health risks for adults age 18+. Please note that all indicators in this profile are estimates based on statistical analysis of survey data, and therefore subject to estimation error.

As shown in *Exhibit III-6*, substantial numbers of adults have lifestyle health risks related to nutrition, weight, physical inactivity, tobacco and alcohol. Please note that these estimates reflect general patterns based on statistical analysis of multiple years of survey data. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. *Note: Maps in Appendix A show the geographic distribution of key adult health risk estimates by zip code.*

Exhibit III-6.
Adult Health Risk Factor Profile (2016-Estimates)

Indicator		Study Region
Estimates-Counts		
Estimated Adults age 18+		66,699
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	56,027
	Overweight or Obese	44,021
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	32,683
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	9,338
	Smoker	14,674
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	23,345
	High Blood Pressure (told by a doctor or other health professional)	21,344
	Arthritis (told by a doctor or other health professional)	18,009
	Diabetes (told by a doctor or other health professional)	7,337
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	14,007
	Fair or Poor Health Status	10,672
Estimates-Rates		
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	84%
	Overweight or Obese	66%
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	49%
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	14%
	Smoker	22%
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	35%
	High Blood Pressure (told by a doctor or other health professional)	32%
	Arthritis (told by a doctor or other health professional)	27%
	Diabetes (told by a doctor or other health professional)	11%
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	21%
	Fair or Poor Health Status	16%

Source: Community Health Solutions analysis data from the Virginia Behavioral Risk Factor Surveillance Survey and local demographic estimates from US Census Bureau. See Appendix B: Data Sources for details.

7. Youth Health Risk Factor Profile

This profile presents estimates of health risks for youth age 10-14 and 14-19. Please note that all indicators in this profile are estimates, and therefore subject to estimation error.

As shown in *Exhibit III-7*, substantial numbers of youth have lifestyle health risks related to nutrition, weight, alcohol, mental health, physical inactivity, and tobacco. Please note that these estimates reflect general patterns based on statistical analysis of survey data. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. *Note: A map in Appendix A shows the geographic distribution of estimated overweight and obese youth age 14-19 by zip code.*

Exhibit III-7.
Youth Health Risk Factor Profile (2016 Estimates)

Indicator	Study Region
Estimates-Counts	
High School Youth Age 14-19	
Total Estimated High School Youth Age 14-19	*4,931*
Met Guidelines for Fruit and Vegetable Intake	*394*
Overweight or Obese	*1,430*
Not Meeting Recommendations for Physical Activity in the Past Week	*2,712*
Used Tobacco in the Past 30 Days	*888*
Had at least One Drink of Alcohol At least One Day in the Past 30 Days	*1,331*
Felt Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	*1,183*
Middle School Youth Age 10-14	
Total Estimated Middle School Youth Age 10-14	*4,689*
Met Guidelines for Fruit and Vegetable Intake	*1,125*
Not Meeting Recommendations for Physical Activity in the Past Week	*1,594*
Used Tobacco in the Past 30 Days	*94*
Estimates-Rates	
High School Youth Age 14-19	
Met Guidelines for Fruit and Vegetable Intake	8%
Overweight or Obese	29%
Not Meeting Recommendations for Physical Activity in the Past Week	55%
Used Tobacco in the Past 30 Days	18%
Had at least One Drink of Alcohol At least One Day in the Past 30 Days	27%
Felt Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	24%
Middle School Youth Age 10-14	
Met Guidelines for Fruit and Vegetable Intake	24%
Not Meeting Recommendations for Physical Activity in the Past Week	34%
Used Tobacco in the Past 30 Days	2%
Source: Community Health Solutions analysis data from the Virginia Youth Risk Behavioral Surveillance Survey and local demographic estimates from US Census Bureau. See Appendix B: Data Sources for details.	

8. Uninsured Profile

This profile presents estimates of the uninsured population within the 0-64 age group. These are 'snapshot' indicators that estimates the number of uninsured at a specific point in time. Please note that all indicators in this profile are subject to estimation error. *Note: Maps in Appendix A show the geographic distribution of key adult and child uninsured estimates by zip code.*

As shown in *Exhibit III-8***,** at any specific point in 2016, an estimated 10,520 residents of the study region were uninsured. Among the uninsured, it is estimated that half have family income below 138 percent of the federal poverty level and may be income-eligible for coverage under Virginia's Medicaid expansion (other eligibility factors may apply). and may be eligible for coverage under Virginia's Medicaid expansion. The estimated number of uninsured children age 0-17 was 1,104 in the study region, and the estimated number of uninsured adults age 18-64 was 9,416.

Exhibit III-8.
Uninsured Profile (2016 Estimates)

Indicator	Study Region
Estimates-Counts	
2016 Nonelderly Population Age 0-64	61,716
Uninsured Nonelderly Age 0-64	10,520
Uninsured Nonelderly Age 0-64 <=138% FPL	5,155
Uninsured Children Age 0-17	1,104
Uninsured Adults Age 18-64	9,416
Estimates-Rates	
Uninsured Nonelderly Population	17%
Uninsured Children Percent	9%
Uninsured Adults Percent	23%

Source: Community Health Solutions analysis of local demographic estimates from US Census Bureau. See Appendix B: Data Sources for details.

9. Medically Underserved Profile

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) are designated by the U.S. Health Resources and Services Administration as being at-risk for health care access problems. The designations are based on several factors including primary care provider supply, infant mortality, prevalence of poverty and the prevalence of seniors age 65+.

As shown in *Exhibit III-9*, all five counties that overlap the study region have been designated as MUAs. For a more detailed description, visit the U.S. Health Resources and Service Administration designation webpage at http://muafind.hrsa.gov/.

Exhibit III-9.
Medically Underserved Areas and Populations

Locality	MUA/MUP designation	Census Tracts
Brunswick County	Full	14 of 14 Census Tracts
Charlotte County	Full	13 of 13 Census Tracts
Lunenburg County	Full	14 of 14 Census Tracts
Mecklenburg County	Full	27 of 27 Census Tracts
Nottoway County	Full	14 of 14 Census Tracts

Source: Community Health Solutions analysis of U.S. Health Resources and Services Administration data. See Appendix B. Data Sources for details.

APPENDIX A: Zip Code-Level Maps

The Zip Code-Level maps in this section illustrate the geographic distribution of the zip code-level study region on key health status indicators. Following the maps is a table with the underlying data. The maps in this section include the following for 2016:

APPENDIX A: Zip Code-Level Maps	
1. Total Deaths, 2016	8. Total Behavioral Health Hospitalization Discharges, 2016
2. Heart Disease Deaths, 2016	9. Estimated Adult Age 18+ Smokers, 2016
3. Malignant Neoplasm (Cancer) Deaths, 2016	10. Estimated Adults Age 18+ with Diabetes, 2016
4. Cerebrovascular Diseases (Stroke) Deaths, 2016	11. Estimated Adults Age 18+ who are Overweight or Obese, 2016
5. Total Live Births, 2016	12. Estimated High School-aged Youth (age 14-19) who are Overweight or Obese, 2016
6. Total Teenage Live Births, 2016	13. Estimated Uninsured Children Age 0-18, 2016
7. Total Prevention Quality Indicator Hospitalization Discharges, 2016	14. Estimated Uninsured Adults, Age 19-64, 2016

Technical Notes

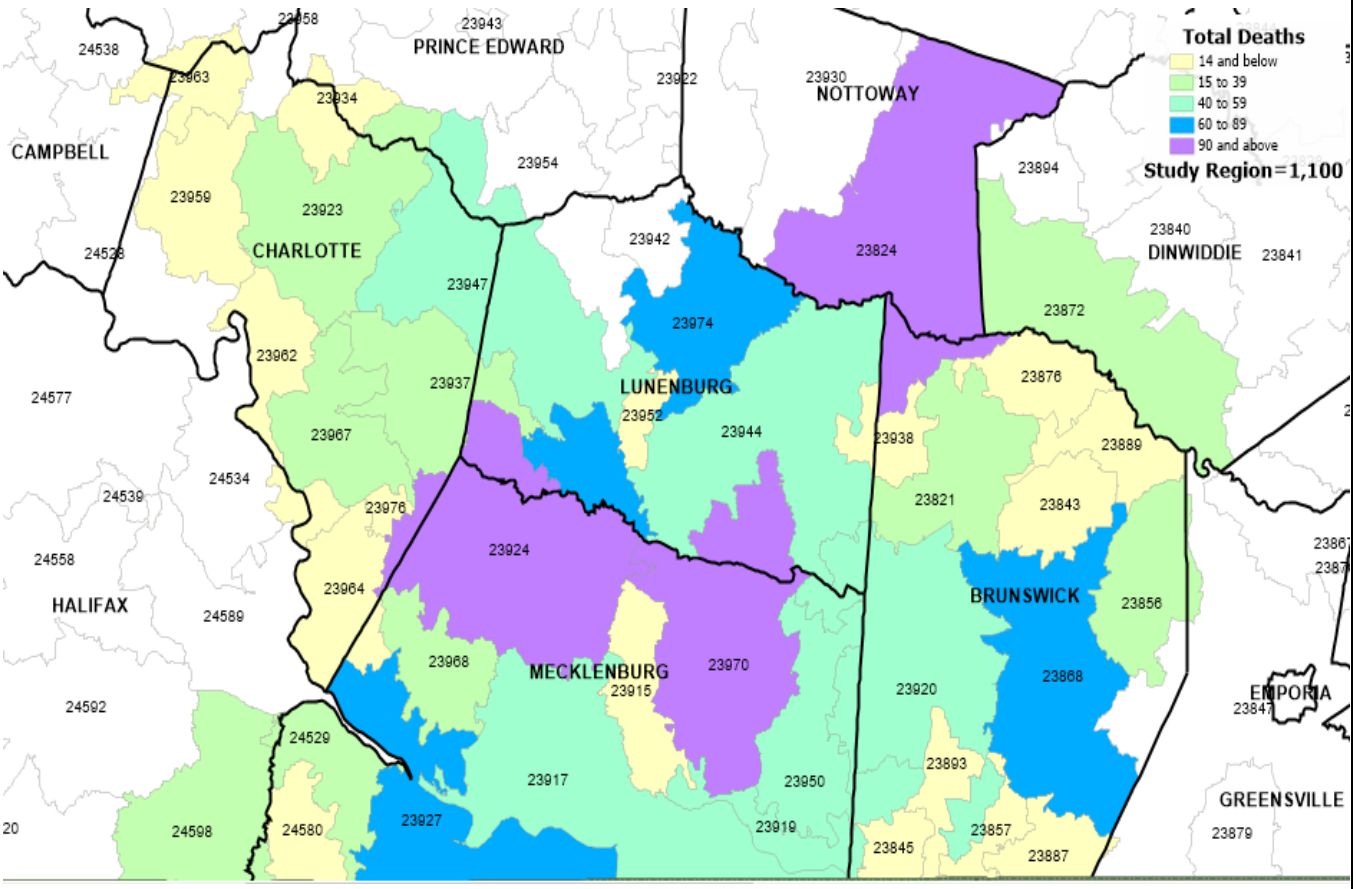
1. The maps and data include 38 zip codes, as identified by VCU Health Community Memorial Hospital, most of which fall within Brunswick, Charlotte, Lunenburg, Mecklenburg and Nottoway counties. It is important to note that zip code boundaries do not automatically align with city/county boundaries, and there are some zip codes that extend beyond the county boundaries. Also, not all zip codes in each of above mentioned localities were identified by VCU Health Community Memorial Hospital as part of the Zip Code-Level Study Region

2. The maps show counts rather than rates. Rates are not mapped at the zip code-level because in some zip codes the population is too small to support rate-based comparisons.

3. Data are presented in natural breaks.

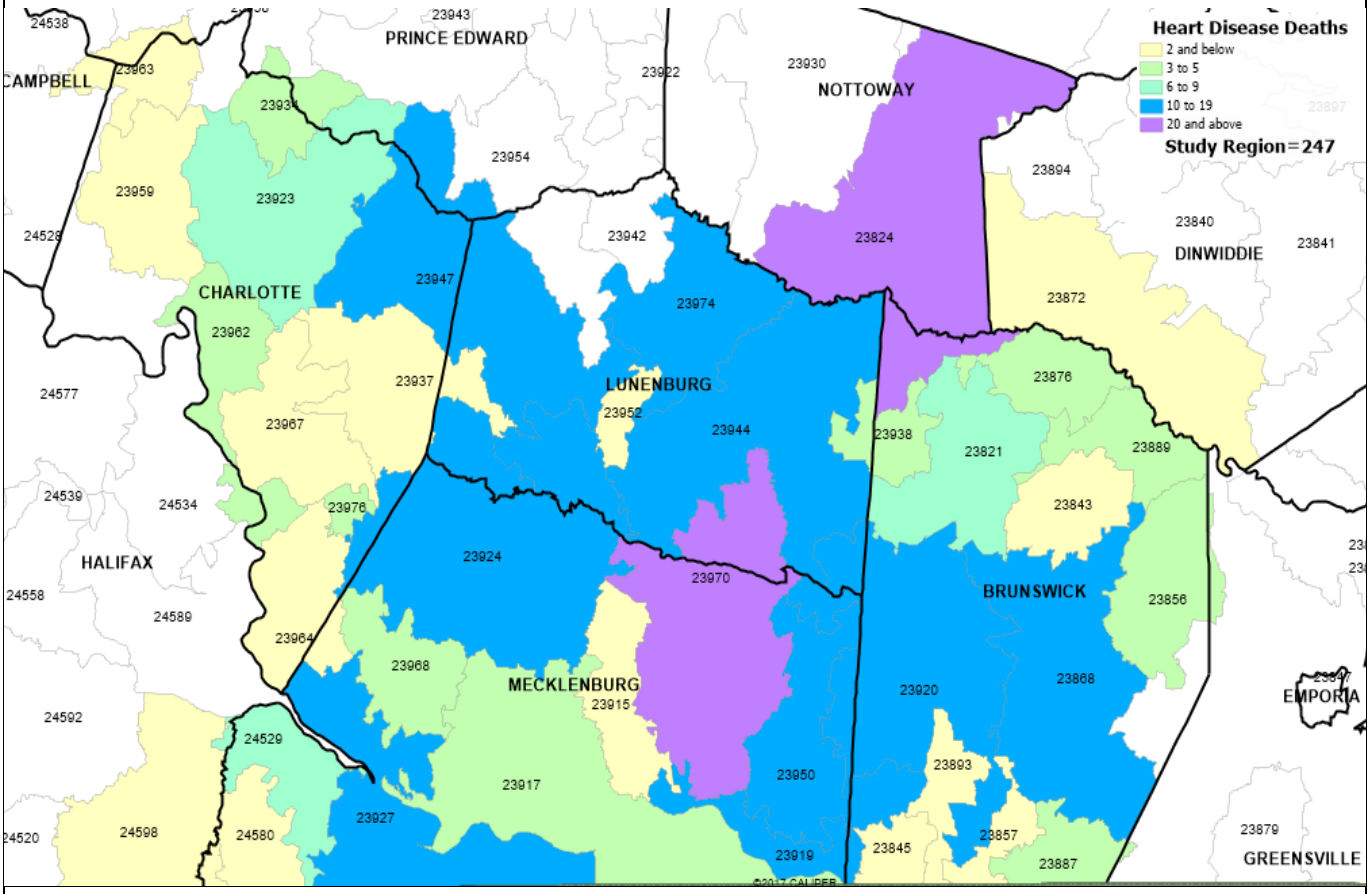
4. Zip Code-Level Study Region zip codes with zero values are noted.

Map 1: Total Deaths, 2016



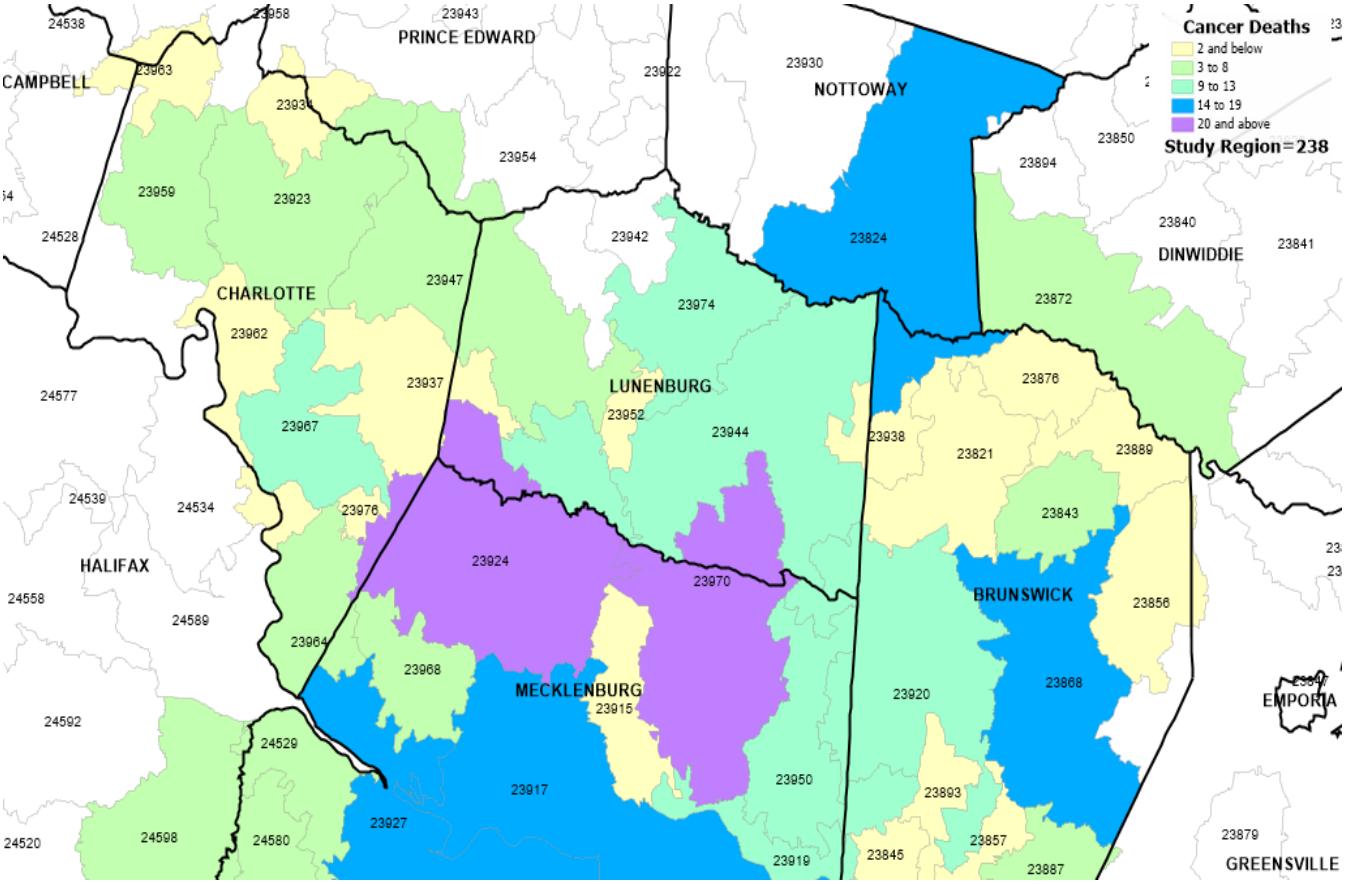
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See Appendix B: Data Sources for details.

Map 2: Heart Disease Deaths, 2016



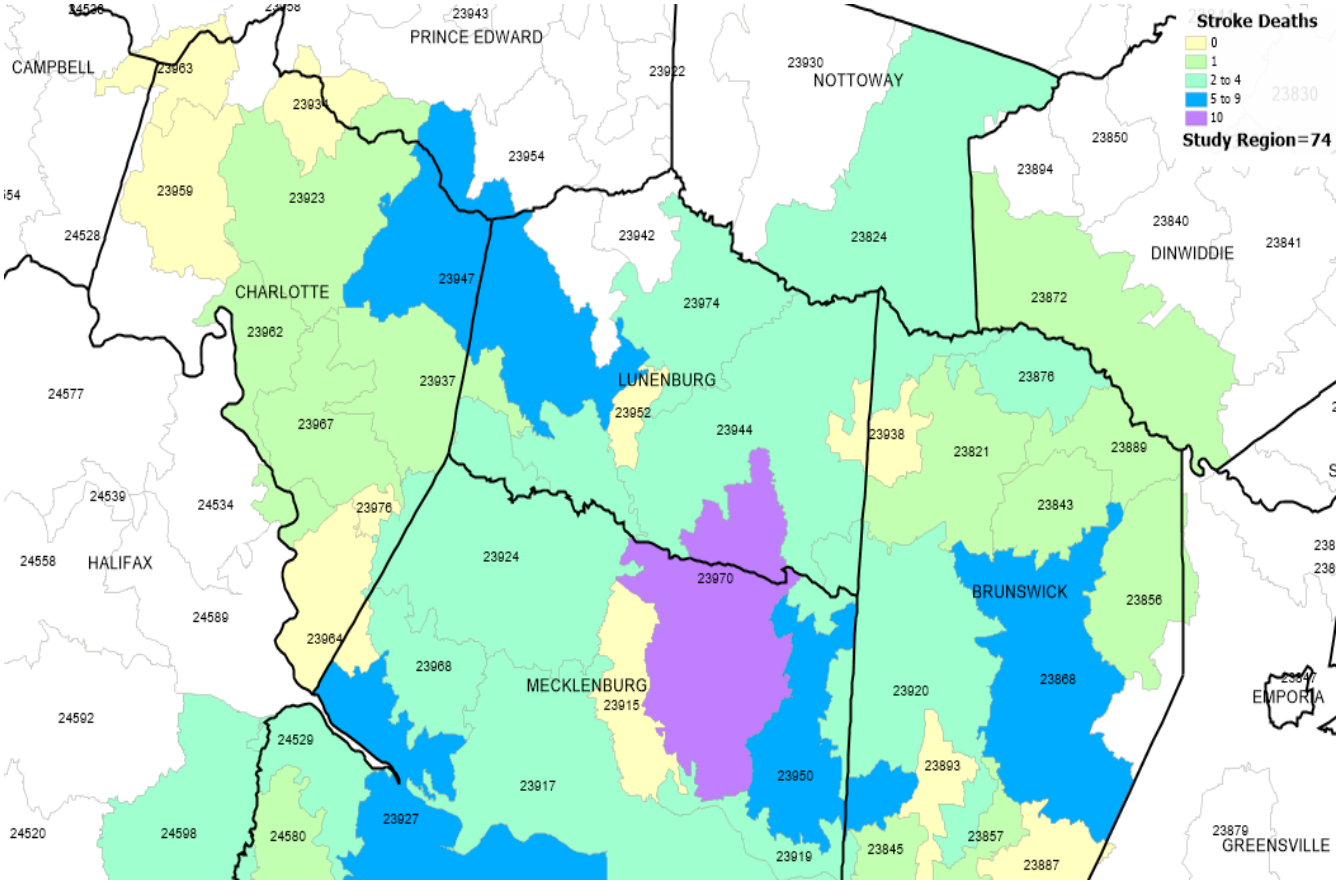
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See Appendix B: Data Sources for details.

Map 3: Malignant Neoplasm (Cancer) Deaths, 2016



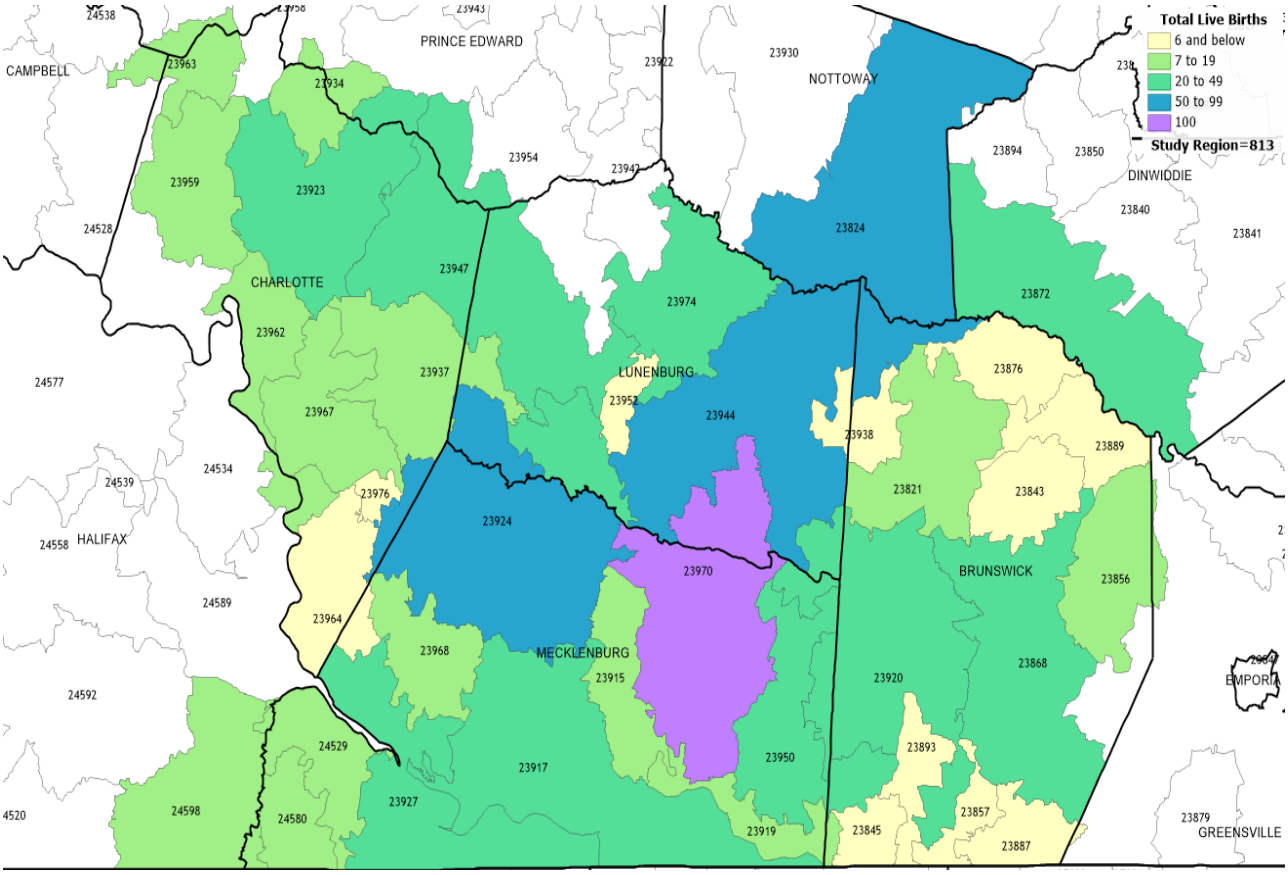
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See Appendix B: Data Sources for details.

Map 4: Cerebrovascular Diseases (Stroke) Deaths, 2016



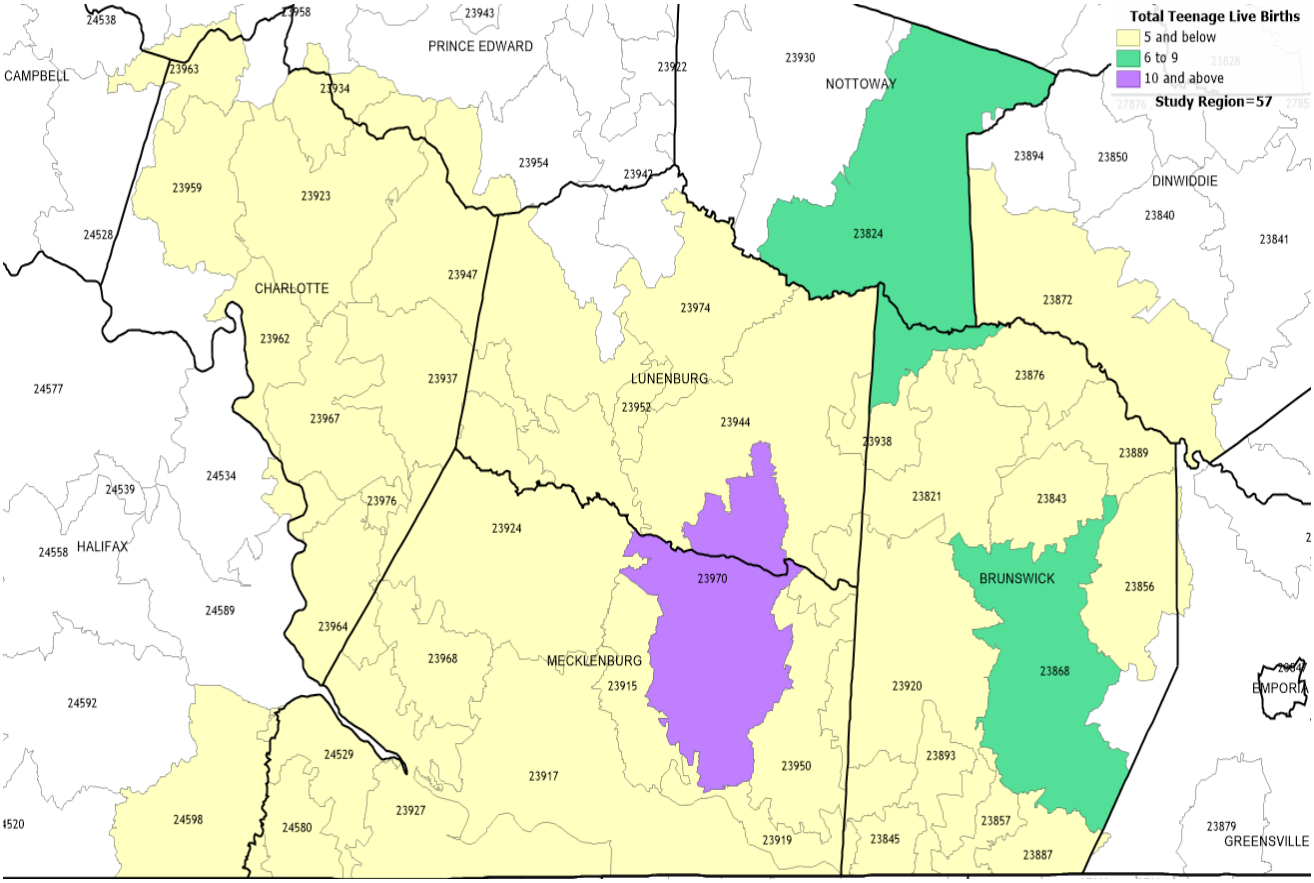
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See Appendix B: Data Sources for details.

Map 5: Total Live Births, 2016



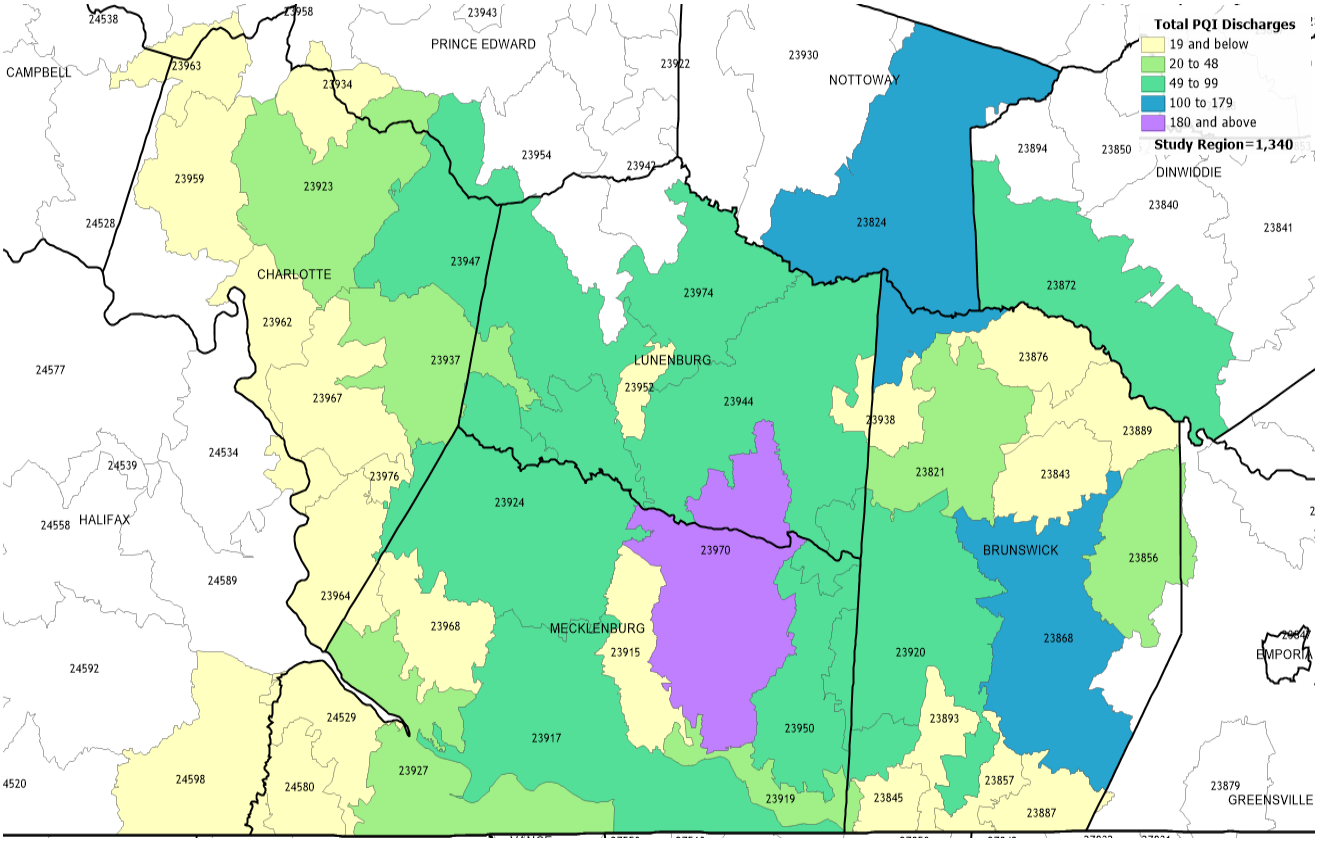
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See Appendix B: Data Sources for details.

Map 6: Total Teenage Live Births, 2016



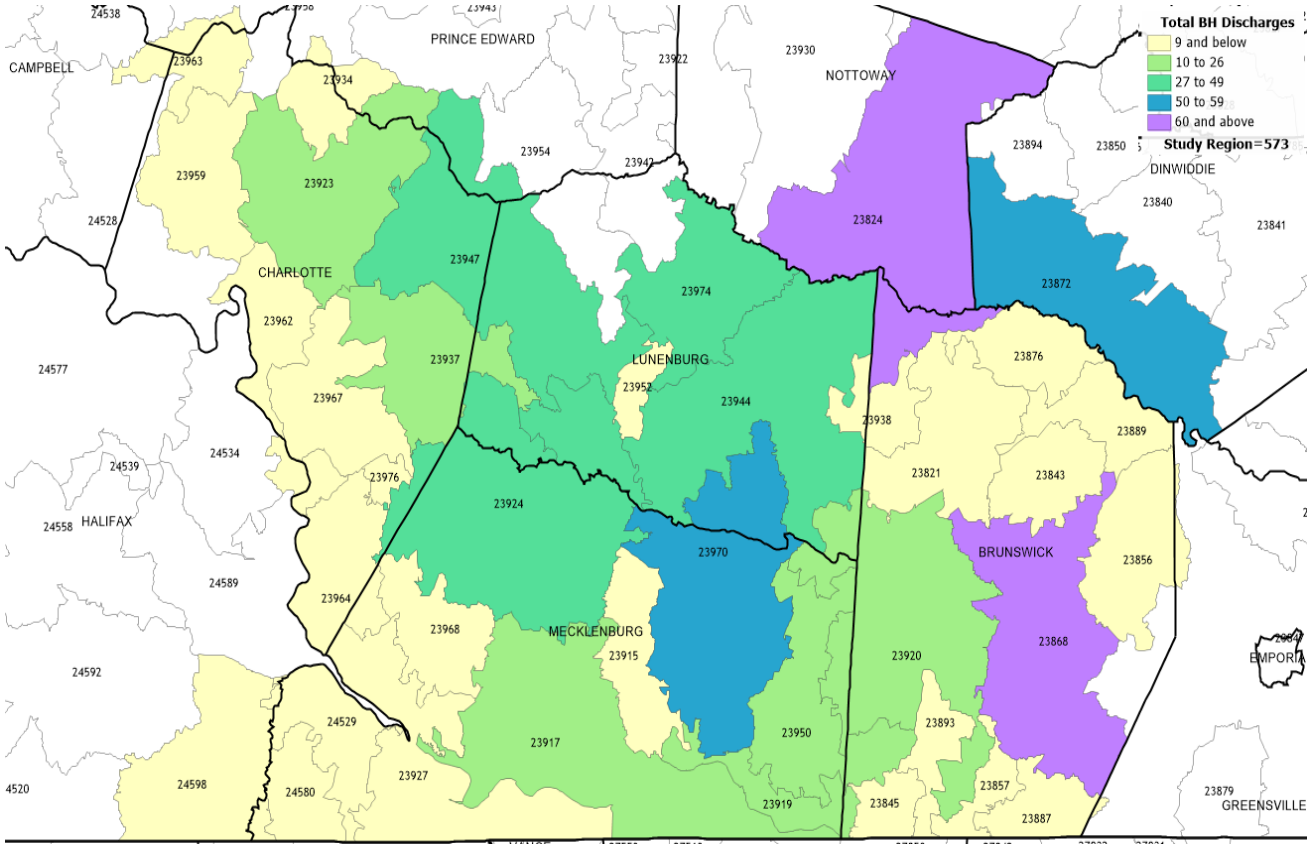
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See Appendix B: Data Sources for details.

Map 7: Total Prevention Quality Indicator (PQI) Hospitalization Discharges, 2016



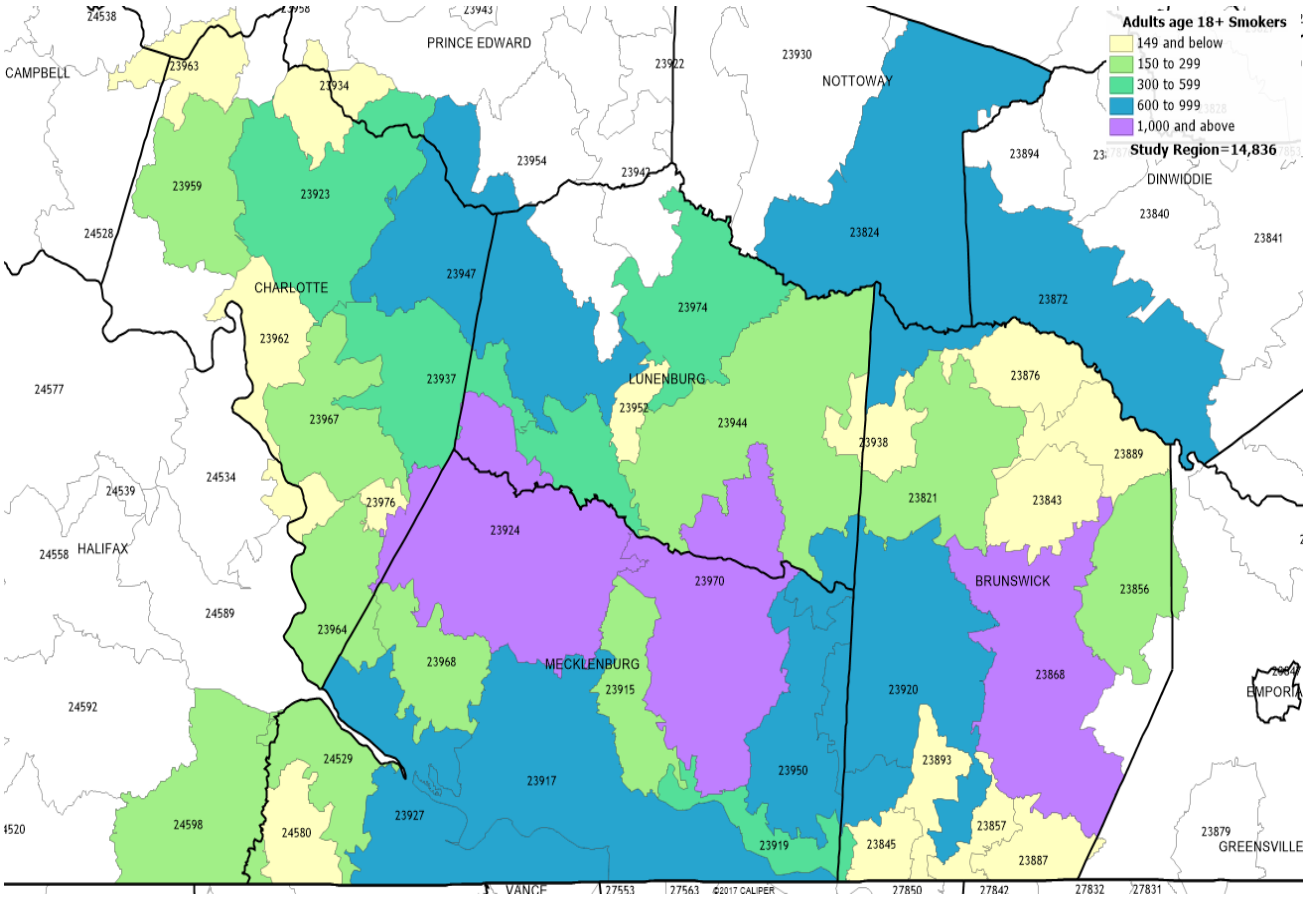
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Inc. See Appendix B: Data Sources for details.

Map 8: Total Behavioral Health (BH) Hospitalization Discharges, 2016



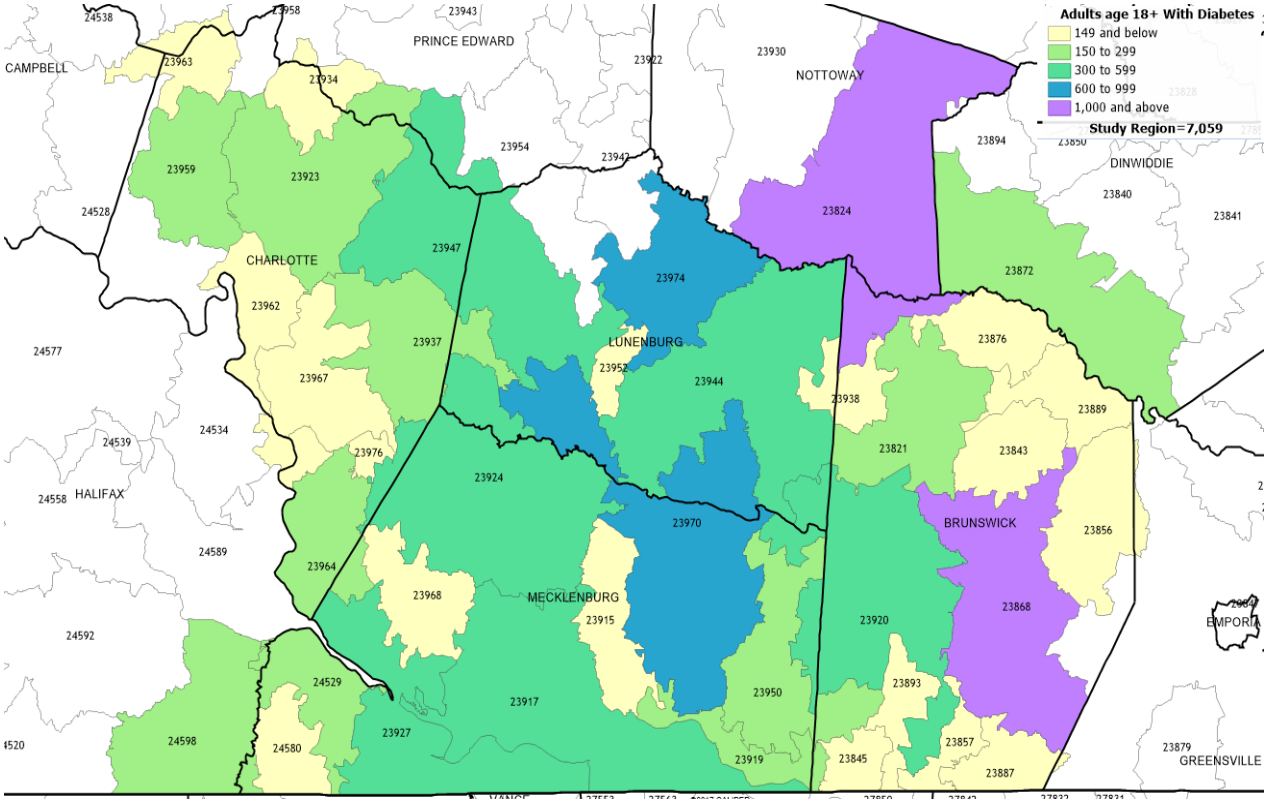
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Inc. See Appendix B: Data Sources for details.

Map 9: Estimated Adults Age 18+ Smokers, 2016-Estimates



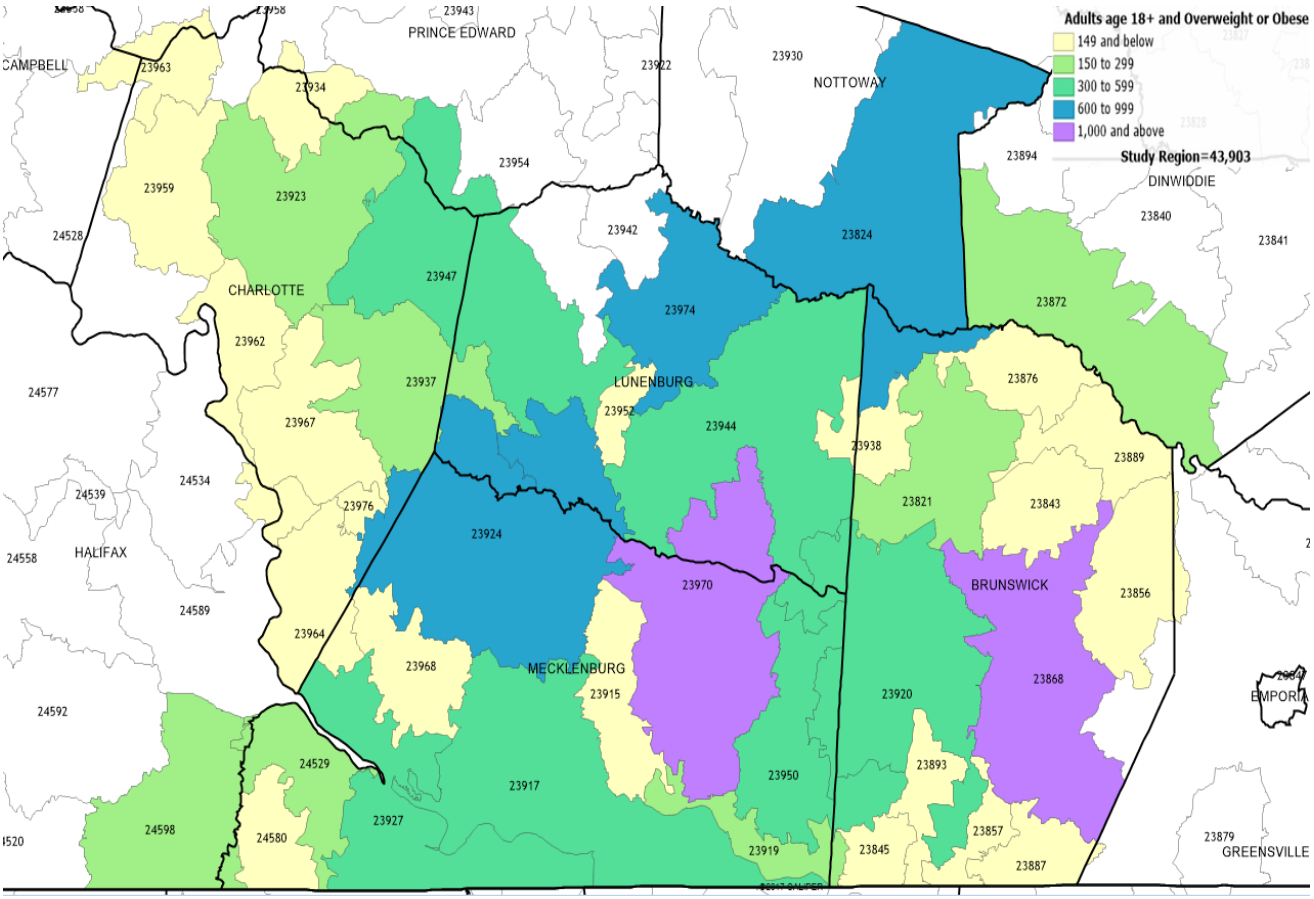
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from U.S Census Bureau. See Appendix B: Data Sources for details.

Map 10: Estimated Adults Age 18+ with Diabetes, 2016 -Estimates



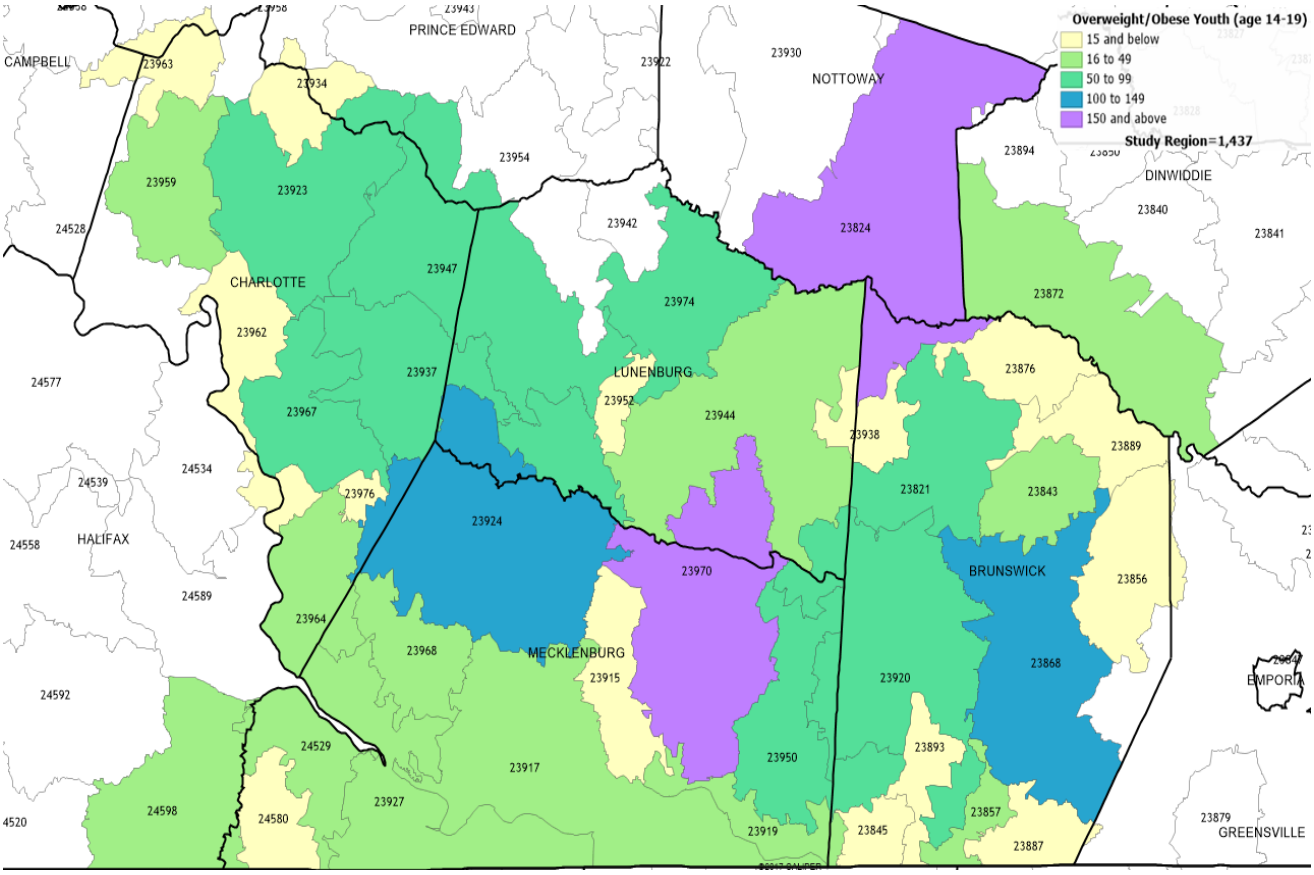
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from U.S Census Bureau. See Appendix B: Data Sources for details.

Map 11: Estimated Adults Age 18+ who are Overweight or Obese, 2016-Estimates



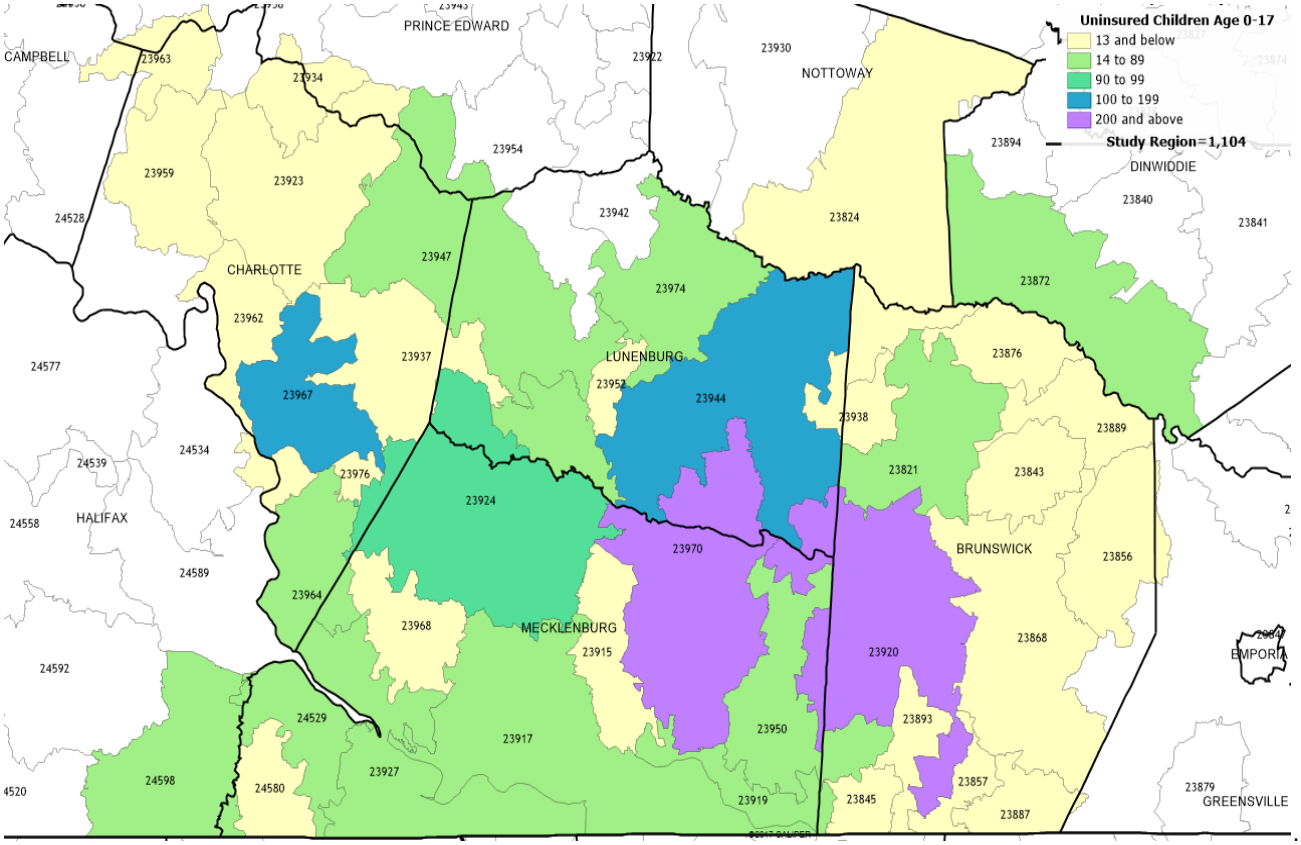
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from U.S Census Bureau. See Appendix B: Data Sources for details.

Map 12: Estimated High School-aged Youth (age 14-19) who are Overweight or Obese, 2016-Estimates



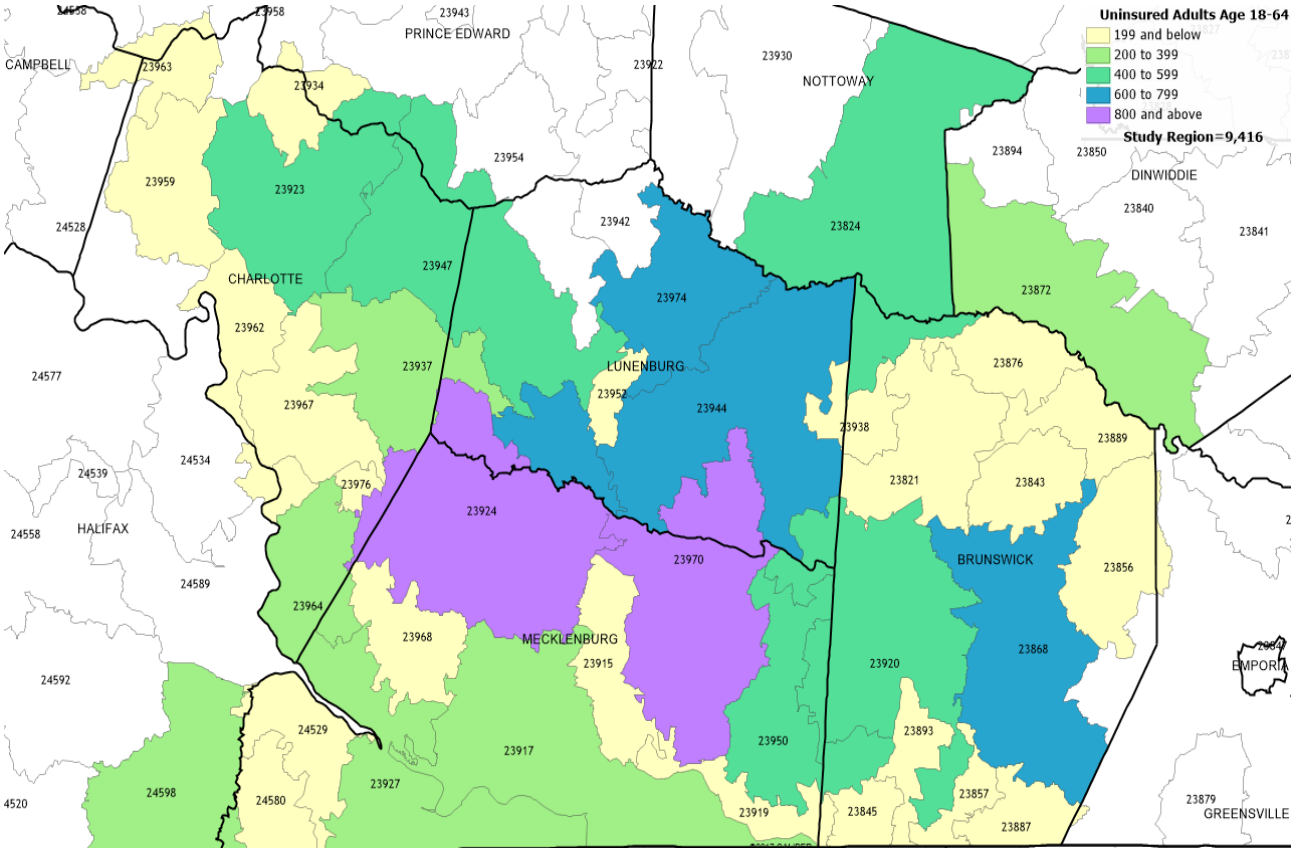
Source: Estimates produced by Community Health Solutions using Virginia Youth Risk Behavioral Surveillance System data and local demographic estimates from U.S Census Bureau. See Appendix B: Data Sources for details.

Map 13: Estimated Uninsured Children, Age 0-17, 2016-Estimates



Source: Estimates of uninsured are based on Community Health Solutions analysis of U.S. Census Bureau. See Appendix B: Data Sources for details.

Map 14: Estimated Uninsured Adults, Age 18-64, 2016 -Estimates



Source: Estimates of uninsured are based on Community Health Solutions analysis of U.S. Census Bureau. See Appendix B: Data Sources for details.

APPENDIX B: Data Sources

Profile	Source
1) Section I: Insights from Community Residents	Community Health Solutions analysis of *Community Insight* survey responses submitted by community residents.
2) Section II: Insights from Community Professional	Community Health Solutions analysis of *Community Insight* survey responses submitted by community professionals.
3) Section III: Health Demographic Snapshot Profile	Community Health Solutions analysis of demographic estimates from US Census Bureau, American Community Survey (2012-2016).
4) Section III: Mortality Profile (also Appendix A)	Community Health Solutions analysis of Virginia Department of Health death record data (2016). Data were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
5) Section III: Maternal and Infant Health Profile (also Appendix A)	Community Health Solutions analysis of Virginia Department of Health death record data (2016). Data were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
6) Section III: Preventable Hospitalization Profile 7) Section III: Behavioral Health Hospitalization Profile (also Appendix A)	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2016 datasets and from US Census Bureau, American Community Survey (2012-2016). Data include discharges for Virginia residents from Virginia hospitals reporting to Virginia Health Information, Inc.) The analysis includes records of discharges of Virginia residents from Virginia hospitals excluding state and federal facilities. Data reported are based on the patient's primary diagnosis. Preventable Hospitalizations-The PQI definitions are detailed in their specification of ICD-9 diagnosis codes and procedure codes. Not every hospital admission for congestive heart failure, bacterial pneumonia, etc. is included in the PQI definition; only those meeting the detailed specifications. Low birth weight is one of the PQI indicators, but for the purpose of this report, low birth weight is included in the Maternal and Infant Health Profile. Also, there are four diabetes-related PQI indicators which have been combined into one for the report. For more information, visit the AHRQ website at http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx *NOTE: Virginia Health Information (VHI) requires the following statement to be included in all reports utilizing its data: VHI has provided non-confidential patient level information used in this report which was compiled in accordance with Virginia law. VHI has no authority to independently verify this data. By accepting this report the requester agrees to assume all risks that may be associated with or arise from the use of inaccurately submitted data. VHI edits data received and is responsible for the accuracy of assembling this information, but does not represent that the subsequent use of this data was appropriate or endorse or support any conclusions or inferences that may be drawn from the use of this data.*
8) Section III: Adult Health Risk Factor Profile (also Appendix A)	Estimates of chronic disease and risk behaviors for adults 18+ were produced by Community Health Solutions using: • Data from the Virginia Behavioral Risk Factor Surveillance System (2014). For more information on BRFSS visit: http://www.cdc.gov/brfss/about/index.htm

Profile	Source
	• Local demographic estimates from US Census Bureau, American Community Survey (2012-2016). Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. Differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are not provided as direct comparisons of local estimates with state estimates are not recommended. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates.
9) Section III: Youth Health Risk Factor Profile (also Appendix A)	Estimates of risk behaviors for youth age 14-19 and 10-14 were produced by Community Health Solutions using: • Data from the Virginia Youth Risk Behavioral Surveillance System from the Centers for Disease Control (2013). For more information on YRBSS visit: http://www.cdc.gov/HealthyYouth/yrbs/index.htm • Local demographic estimates from US Census Bureau, American Community Survey (2012-2016). Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. Differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are not provided as direct comparisons of local estimates with state estimates are not recommended. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates.
10) Section III: Uninsured Profile (also Appendix A)	Community Health Solutions analysis of demographic estimates from US Census Bureau, American Community Survey (2012-2016). Differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are not provided as direct comparisons of local estimates with state estimates are not recommended. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates.
11) Section III: Medically Underserved Profile	Community Health Solutions analysis of U.S. Health Resources and Services Administration data. For more information, visit: http://muafind.hrsa.gov/.