A Community Health Needs Assessment

Prepared for VCU Health System- Community Memorial Hospital

By Community Health Solutions

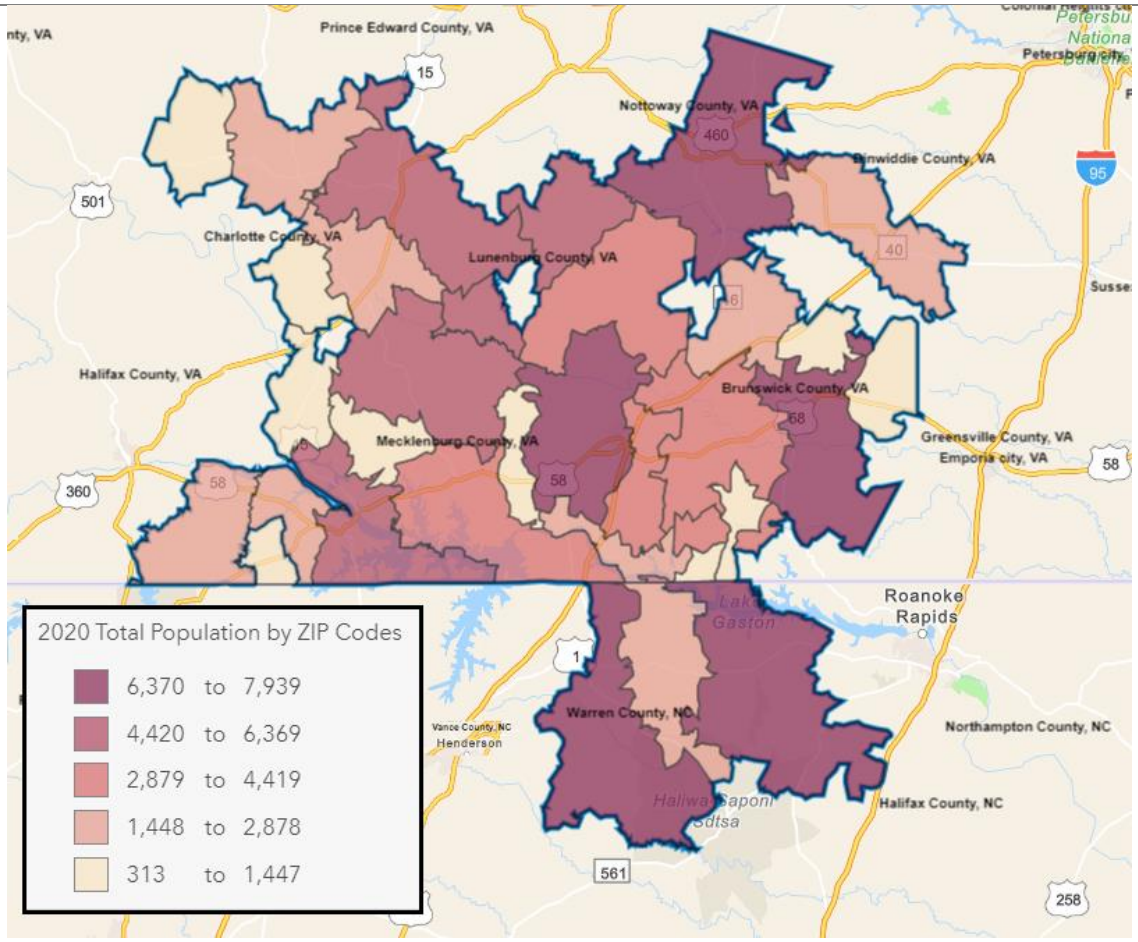
May 2021

Executive Summary

The mission of VCU Health System 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 2021.

As shown in the map below, the study focuses on the VCU Health CMH service area of 30 zip codes, most of which fall within Brunswick, Charlotte, Lunenburg, Mecklenburg and Nottoway counties in Virginia, and Warren County in North Carolina. This region is home to more than 97,000 community members. The CHNA study was designed to provide insight about community health needs and opportunities for community health improvement. Research activities for the study included a survey of community residents, a survey of community professionals, and analysis of a variety of community health indicators.

The Study Region (n=97,081)



This Executive Summary provides an overview of the study results. More detailed analysis is provided in the four sections that follow, including:

- Section 1. Insights from Community Residents
- Section 2. Insights from Community Professionals
- Section 3. Community Indicator Profiles
- Section 4. Social Determinants of Health

Summary Insights from Community Residents (Section 1)

Section 1 of the report presents results from the survey of community residents. Insights were collected via surveys administered online (see Section 1 for more detail on the impact of COVID-19 on survey methods). Two hundred and eighteen (218) community residents submitted a response (although not every respondent answered every question). The respondents provided rich insights about community health in the study region. The summary results are outlined below and presented in more detail in Section 1 of the report.

Demographic Profile	• 218 community residents completed the survey • Respondents were 86% white and 14% minority; and mostly female, upper middle aged (55-74), and at the higher income levels.
Community Needs Related to COVID-19	• Sixteen (7%) respondents reported they or an immediate family member lost employment. • Two respondents (1%) reported they or an immediate family member lost housing. • Groups identified as needing extra help due to COVID-19 include elderly; low income; parents with school aged children; people with limited internet access. • Among the most identified personal difficulties were feeling lonely or isolated from others; keeping good mental health; and keeping good physical health.
Health Screenings and Services Needed	• Residents identified blood pressure checks; routine check-ups; vaccination/immunizations, exercise/physical activity; and dental screenings as the most needed health screenings and services needed.
Preventative Procedures Recieved in Past 12 Months	• Most residents received blood pressure checks; flu shots; physical exams; dental cleaning/X-rays; vision screenings; and blood sugar checks in the past year.
Barriers to Healthcare Services	• The most commonly identified barriers to healthcare unavailability of local specialty care; high cost/out of pocket expenses; the inability to get appointments; lack of provider/staff follow through; and limited or no insurance.
Cancer Impact and Supports Needed	• Most respondents (64%) have been impacted by cancer. The most frequently mentioned cancer supports needed included home health/hospice; education/information; social/emotional support; financial assistance; transportation and services provided locally.
Neighborhood and Community Environment Needs	• The most commonly identified neighborhood and community needs are spaces for walking, access to healthy foods and opportunities to participate in community events/activities.
Health Care Service Needs	• The most commonly identified health care service needs were affordable health insurance; services for weight control; dental services; vision services; mental health services; and primary care services.
VCUHS CMH Services	• Most respondents (56%) were aware of the various healthcare services offered at VCUHS Community Memorial Hospital.
Community Support Service Needs	• Over 40% of respondents identified assisted living services; services for older adults; after school programs; long term care services; and public transportation as needing improvement.

Defining a Healthy Community	• Respondents defined a healthy community as one with access to healthcare services; access to community and social services; supports for healthy lifestyles; supports for the elderly population and supports for people with behavioral health concerns.
Groups Who Need Help Obtaining Better Health	• Commonly mentioned vulnerable populations included the elderly; those with limited access to services; low income populations; populations with health equity barriers (minority populations; Hispanic population, immigrants, etc.); and children.
New Health Issues	• Among the most commonly identified new health issues were COVID-19 related issues; access to healthcare; behavioral health; unhealthy lifestyles; and community and social services access issues.
Health Resources	• Commonly mentioned community assets included healthy lifestyle supports; healthcare services; community and social services; and supports for elderly residents.
Working Together for Community Health Improvement	• A wide range of ideas were provided by the respondents. Collaboration ideas included more community engagement; healthcare services; community and and social services and COVID-19 response.
Ideas and Suggestions for Promoting Better Health	• Commonly mentioned ideas included healthcare services; supports for healthy lifestyles; additional community and social services; COVID-19 response efforts and supports for elderly residents.

Summary Insights from Community Professionals (Section 2)

Section 2 of the report presents results from the survey of community professionals. Insights were collected via surveys administered online. A total of 85 individuals submitted a response (although not every respondent answered every question). The summary results are outlined below and presented in more detail in Section 2 of the report.

Organizational Affiliation

- 85 community professionals completed the survey
- Respondents were affiliated with local business, faith-based organizations, healthcare; local government; health and social services safety net organizations, public safety; schools and local nonprofits.

Community Needs Related to COVID-19

- 64% reported an increase in clients/consumer who lost employment.
- 20% reported an increase the number of clients/consumers who lost housing.
- Groups identified as needing extra help due to COVID-19 include elderly; parents of school aged children; children learning virutally; unemployed individuals; people suffering from COVID-19 related illness; and essential workers.
- Among the most identified difficulties were keeping good mental health; managing schooling at home for children; feeling lonely or isolated; experiencing overall financial hardship; and keeping good physical health.

Community Health Concerns

- The most commonly identified concerns were high blood pressure; depression; adult obesity/overweight; cancer; and diabetes.

Community Services that Need Strengthening

- The most commonly mentioned services that need strengthening include behavioral health services; employment opportunity/workforce development; aging services; job/vocational training; and health insurance coverage.

Defining a Healthy Community	• Respondents defined a healthy community as one with access to healthcare; healthy lifestyle supports; access to community and social services; supports for people with behavioral health concerns; and health equity.
Community Health Assets	• Commonly mentioned community assets were healthy lifestyle supports; healthcare services; community and social services; supports for children; suports for the elderly and community engagement.
New Health Issues	• Among the most commonly identified new issues were access to healthcare; behavioral health; COVID-19; child health; community and social services; unhealthy lifestyles and senior health issues.
Working Together for Community Health Improvement	• Collaboration ideas included more community and social services; community engagement; healthcare services; healthy lifestyle supports and more community collaboration.
Ideas and Suggestions for Promoting Better Health	• Commonly mentioned ideas included healthy lifestyle supports; addressing COVID-19 needs; health care services; supports for people with behavioral health concerns; community and social services and community engagement.

Summary Insights from Community Indicator Profiles (Section 3)

Section 3 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 summary results are outlined below and presented in more detail in Section 3 of the report.

Community Demographics

- The total population of is estmated at 97,081 people.
- Children age 0-17 represent 13% of the population.
- Seniors age 65+ represent 24% of the population.
- 39% percent of the population is Black/African American.
- 4% of the population is Hispanic.

Social Determinants of Health

- 18% of households have incomes below poverty.
- 18% of the population age 25+ is without a high school diploma.
- The median household income and per capita income for the study region are below the Virginia statewide averages.

Health Risk Behaviors for Adults

- An estimated 79,885 adults age 18+ reside in the study region.
- Applying health district level or statewide survey data to the local population, an estimated:
  - 77% are overweight or obese.
  - 38% had no physical activity in the past 30 days.
  - 84% consume less than five servings of fruits and vegetables per day.
  - 21% are smokers.
  - 15% are at risk for binge drinking.

Health Risk Behaviors for High School Youth

- An estimated 5,938 youth age 14-19 reside in the study region.
- Applying health district level or statewide survey data to the local population, an estimated:
  - 34% are overweight or obese.
  - 23% have used tobacco or vapor products.
  - 60% do not meet recommendations for physical activity.

Access to Health Care

- An estimated 69,082 individuals age 0-64 lived in the study region in 2019.
- According to health insurance estimates from the US Census Bureau, an estimated 14% of individuals age 0-64 were uninsured at any point in 2019.
- As of 2021, all six counties that overlap with the study region are designated as medically underserved areas by the U.S. Health Resources and Services Administration.

Leading Causes of Death

- In 2019 the five leading causes of death in the study region were heart disease (216), malignant neoplasms (cancer) (210), cerebrovascular disease (stroke) (65), chronic lower respiratory disease (55), and unintentional injury (52).

Maternal and Infant Health

- In 2019 there were 705 total live births, with 73 low weight births, 119 births without early prenatal care, 400 non-marital births, and 29 births to teens.
- The five-year average infant mortality rates and teen pregnancy rates were higher than the statewide rate for Brunswick, Mecklenburg and Nottoway counties.

Injury and Violence

- In 2018 residents had 443 inpatient hospitalizations for selected injury or violence-related incidents, with the leading causes with the leading causes being unintentional fall (112), firearm (88), drug poisoning due to overdose (88), traumatic brain injury (82), and self-harm (35).

Potentially Avoidable Hospitalizations

- Some specifically-defined hospitalizations are potentially avoidable with adequate access to outpatient care and other health supports.
- In 2019 residents had 1,219 potentially avoidable hospitalizations.
- The leading diagnoses for these hospitalizations were congestive heart failure (526), diabetes (244), COPD or asthma in older adults (213), community acquired pneumonia (94), and urinary tract infection (88).

Hospitalizations for Mental Health and Substance Use Diagnoses

- In 2019 residents had 376 hospitalizations for behavioral health conditions in Virginia community hospitals.
- The leading causes of hospitalization were major depressive disorder - recurrent (91), major depressive disorder – single episode (50), bipolar disorder (48), alcohol related disorders (43), and schizoaffective disorders (42).

Summary Insights on Social Determinants of Health (Section 4)

Section 4 presents community insights and data for exploring social determinants of health in the region. Social determinants of health (SDoH) have been defined as the conditions under which people are born, grow, live, work, and age, and include factors such as socioeconomic status, education, employment, social support networks, and neighborhood characteristics.[1] A growing body of research indicates that SDoH can be linked to a lack of opportunity and resources to protect, improve, and maintain health. The impacts of SDoH can be seen in disparities in health status and access to healthcare for individuals and populations.

Section 4 explores the results of the CHNA study from a SDoH perspective. Part A provides summary insights about SDoH from the survey of community residents. Part B presents a set of maps that show where populations with SDoH risk reside within the counties and the regional overall including low-income households. This type of geographic information can be helpful for planning efforts to reduce health disparities and increase health equity.

[1] American Academy of Family Physicians

Section 1. Insights from Community Residents

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. Two hundred and eighteen (218) community residents submitted a response (although not every respondent answered every question). The respondents provided rich insights about community health in the study region. This section describes the methods and results of the survey.

A. Survey Methods

VCUHS CMH began with a goal to conduct an inclusive survey with insights from all demographic groups, including low-income and minority populations.

The arrival of COVID-19 and the related protective measures made it impossible to conduct the survey on site at community locations. Consequently, all survey responses reported here were completed online. We recognize there could be many community members who would have completed a paper survey, including community members with lower income or lack of digital access. This is apparent in the survey results, which are under-representative of low-income and minority households relative to their overall proportion of the population. This occurred despite extra efforts to reach out to members of these population segments.

It should also be noted that the surveys were conducted online using convenience sampling methods. Convenience sampling is a practical approach for obtaining insights from as many people as possible. It differs from probability sampling, which involves random selection of a smaller group of respondents that should be representative of the broader population. The results of a convenience sample are instructive for understanding the scope of issues and opportunities in a community; however, they are not necessarily representative of the entire community.

The survey results are presented in the following order:

B. Demographic Profile

Community residents were asked to describe their demographic background. The resulting demographic profile of survey respondents is shown in **Exhibit 1.1**. (See notes in the survey overview regarding under-representation of low income and minority populations). Exhibit 1.2 shows the reported zip code of residence for survey respondents.

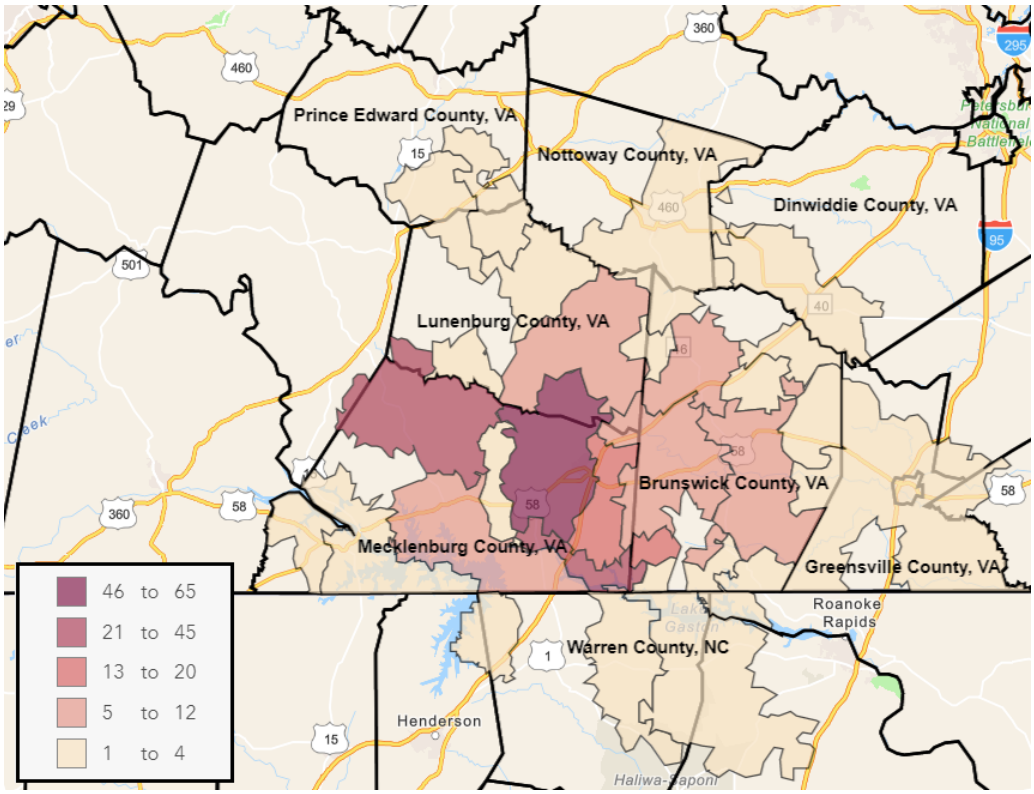
Exhibit 1.1
Demographic Profile
(n=218)

Category	Count	Percent
Age (n=217)		
18-24	4	2%
25-34	8	4%
35-44	16	7%
45-54	26	12%
55-64	43	20%
65-74	80	37%
75-84	34	16%
85+	6	3%
Race (n=215)		
Asian	1	0%
American Indian or Alaska Native	1	0%
Black or African American	29	13%
Multiple Race	0	0%
Pacific Islander	0	0%
White	184	86%
Other	0	0%
Ethnicity (n=213)		
Hispanic, Latino, or Spanish origin	3	1%
Non-Hispanic, Latino, or Spanish origin	210	99%
Gender (n=214)		
Female	161	75%
Male	53	25%
Unknown	0	0%
Income (n=211)		
Less than $25,000	7	3%
$25,000-$34,999	17	8%
$35,000-$49,999	31	15%
$50,000-$74,999	53	25%
$75,000+	87	41%
Don't Know/Not Sure	16	8%

Category	Count	Percent
Education (n=217)		
Less than High School	1	0%
High School or GED	16	7%
Some College	54	25%
Associate degree	39	18%
Bachelor's Degree	46	21%
Master's Degree	36	17%
Professional Degree	15	7%
Doctorate	10	5%
Household Size (n=217)		
1	46	21%
2	126	58%
3	21	10%
4	17	8%
5	5	2%
More Than 5	2	1%
School Aged Children in the Household (n=216)		
Yes	33	15%
No	183	85%
Sources of Health Information (n=216)		
Health Care Provider (Example: Physician, Nurse Practitioner)	202	94%
Online Resources (Example: WebMD)	113	52%
Family Member	45	21%
Urgent Care	41	19%
Friends	30	14%
Hospital Emergency Department	21	10%
Local Health Department	18	8%
Social Media Resources (Example: Facebook)	9	4%
Faith Based Organization	6	3%
Free Clinic	4	2%

Community residents were also asked to indicate the zip code where they live in the study region. The map and table in **Exhibit 1.2** show the number of survey responses received from residents of each zip code. (Please note some zip codes overlap county boundaries.)

Exhibit 1.2
Survey Responses by Zip Code of Residence
(n=218)



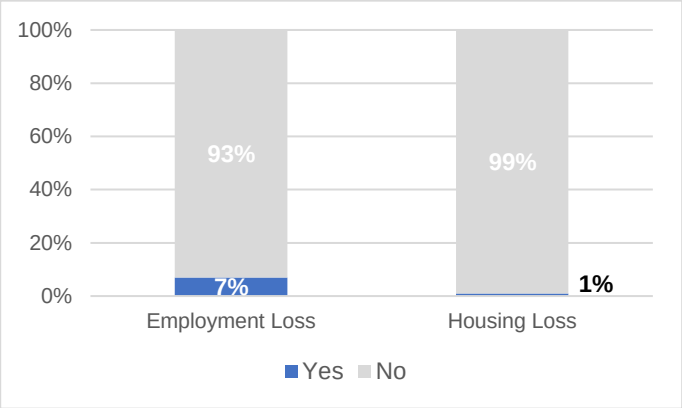
Top 11 Zip Codes	Count	Percent
23970 (South Hill)	65	30%
23919 (Bracey)	27	13%
23924 (Chase City)	25	12%
23950 (La Crosse)	16	7%
23821 (Alberta)	8	4%
23868 (Lawrenceville)	9	4%
23920 (Brodnax)	8	4%
23944 (Kenbridge)	8	4%
23917 (Boydton)	6	3%
23927 (Clarksville)	4	2%
23974 (Victoria)	4	2%

C. Community Needs Related to COVID-19

Community residents were asked to share their insights on community needs specifically related to COVID-19. The results are shown in **Exhibit 1.3**. Sixteen (7%) respondents said they or an immediate family member lost employment due to COVID-19, and two respondents (1%) reported they or a family member lost housing. Survey respondents identified multiple groups that need extra help due to COVID.19. They also shared their experiences of personal difficulty as shown in the bottom panel.

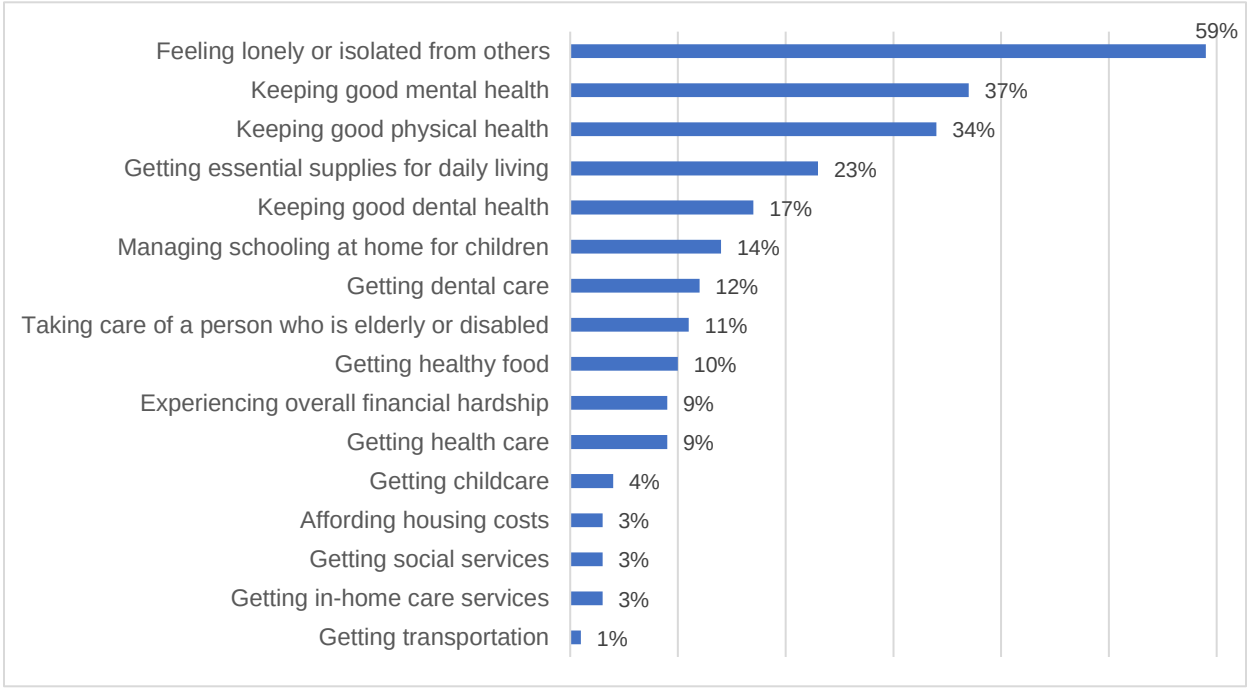
Exhibit 1.3
Community Needs Related to COVID-19

Household/Personal Employment (n=216) or Housing Loss (n=216)



Groups Who Need Extra Help (n=112)

Experiences of Personal Difficulty during COVID-19 (n=145)

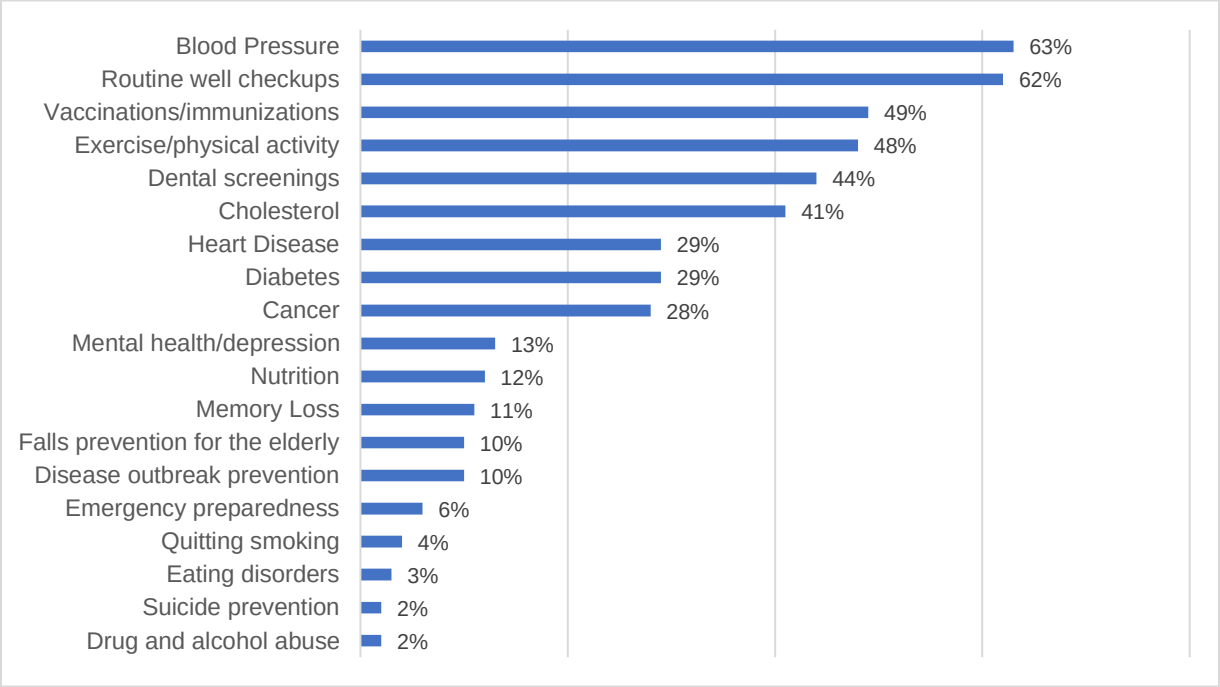


D. Health Needs Prior to COVID-19

Community residents were asked to share their insights on overall health needs for themselves and their family, before COVID-19. The following pages include a summary of health screenings and services needed; preventative procedures received and barriers to healthcare.

As shown in **Exhibit 1.4**, community residents were asked to review a list of health screenings and services and identify the top five services they currently need to keep themselves and their immediate family healthy. The residents identified blood pressure checks; routine check-ups; vaccination/immunizations, exercise/physical activity; and dental screenings as the most needed health screenings and services needed.

Exhibit 1.4
Health Screenings and Services Needed (n=208)

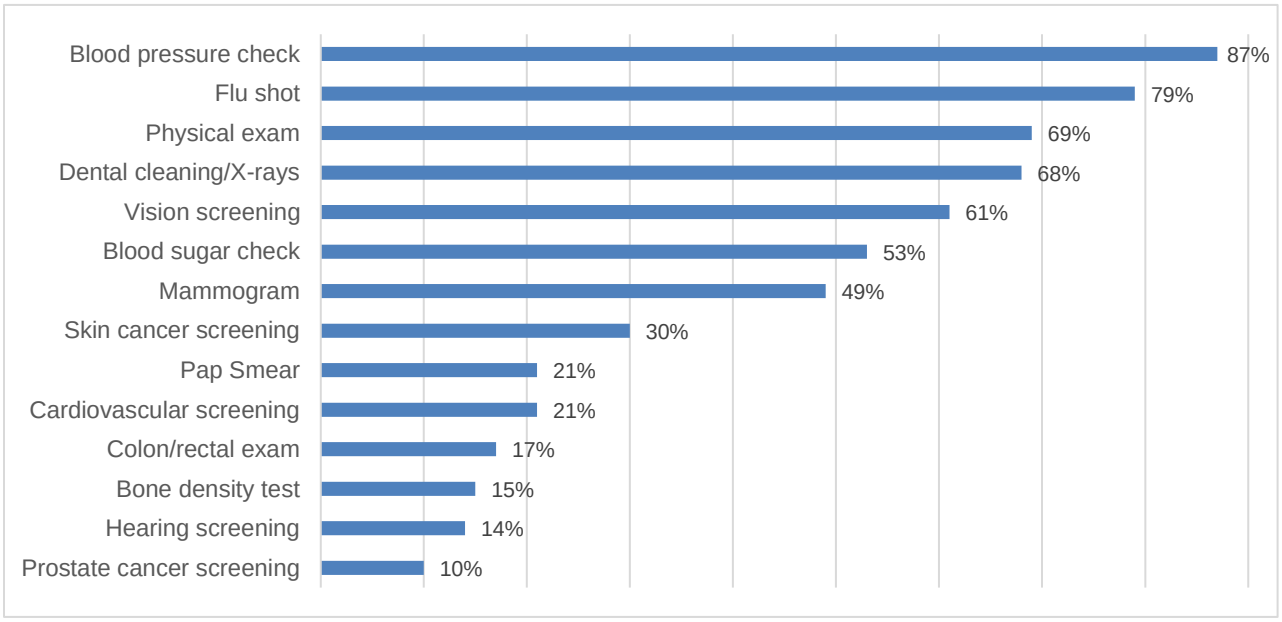


Additional Comments:

- Checking on the elderly more often
- Yoga and breathing exercises
- COVID19
- Dermie
- Physical therapy for husband

As shown in **Exhibit 1.5**, community residents identified the preventative procedures they received in the past 12 months. Most residents received blood pressure checks; flu shots; physical exams; dental cleaning/X-rays; vision screenings; and blood sugar checks in the past year.

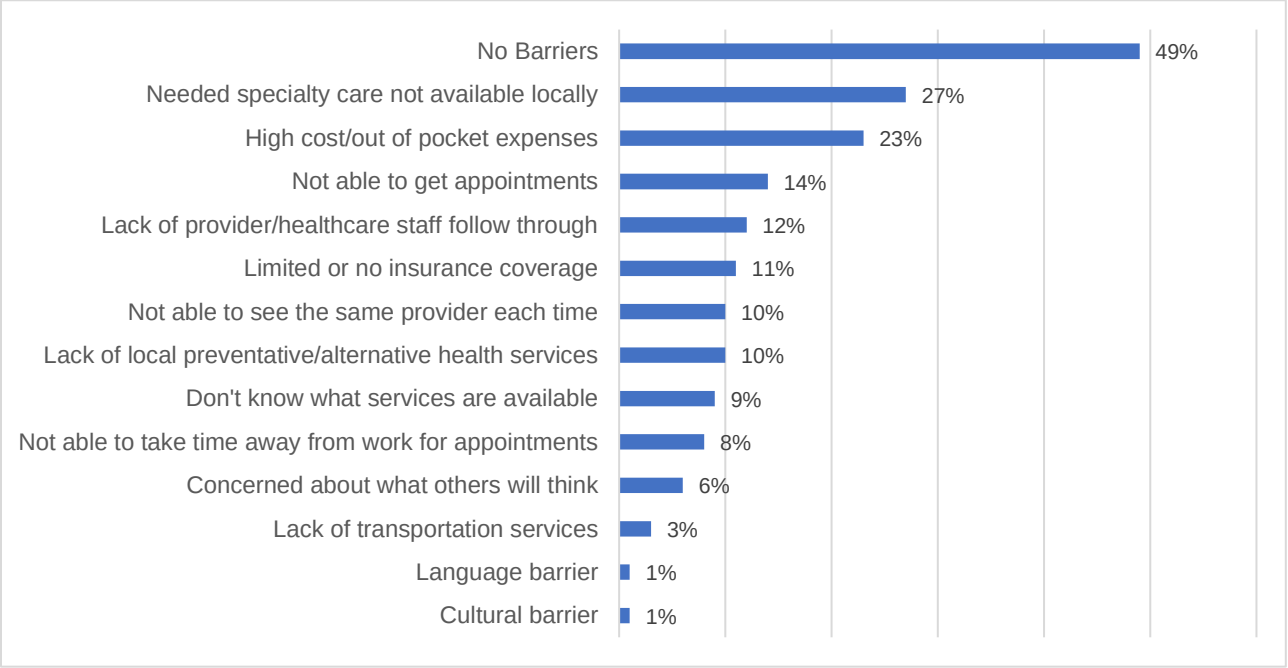
Exhibit 1.5
Preventative Procedures Received in the Past 12 Months (n=214) *



**The arrival of COVID-19 and the related protective measures may have been a barrier to respondents receiving services at the time of the survey.*

As shown in **Exhibit 1.6**, respondents identified the barriers to obtaining the healthcare services they and their immediate family have experienced. Forty-nine (49%) of respondents did not report barriers to healthcare services. The most commonly identified barriers for the remaining respondents included unavailability of local specialty care; high cost/out of pocket expenses; the inability to get appointments; lack of provider/staff follow through; and limited or no insurance.

Exhibit 1.6
Barriers to Healthcare Services (n=192)



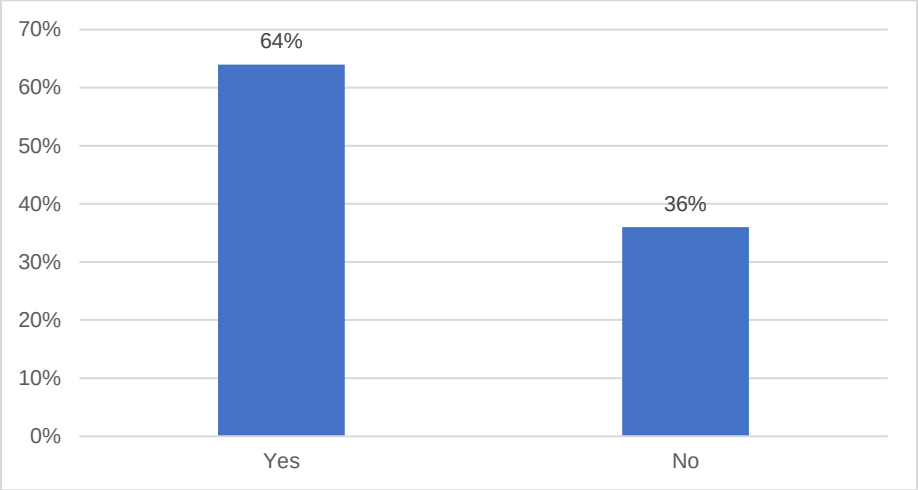
Additional Comments:

- Transport to Dr./hospital appointments
- Rheumatologist
- Limited covid test sites
- After hours medical care
- Some physician services not available
- Really long waits even with appointment times
- Heated pool helps aching joints but closed now
- No Acupuncturist available
- No lab/x-ray services
- Need more local specialists
- The phones in the CARE building are not being answered promptly nor calls returned
- Having to travel long distance for specialty services

E. Cancer Impact and Supports Needed

Community residents were asked whether they, or an immediate family member had been impacted by cancer. If the respondents had been impacted by cancer, they were asked to share what community supports could assist them in managing the diagnosis. As shown in **Exhibit 1.7**, most respondents (64%) have been impacted by cancer. The most frequently mentioned cancer supports needed included home health/hospice; education/information; social/emotional support; financial assistance; transportation and services provided locally.

Exhibit 1.7
Cancer Impact (n=214)

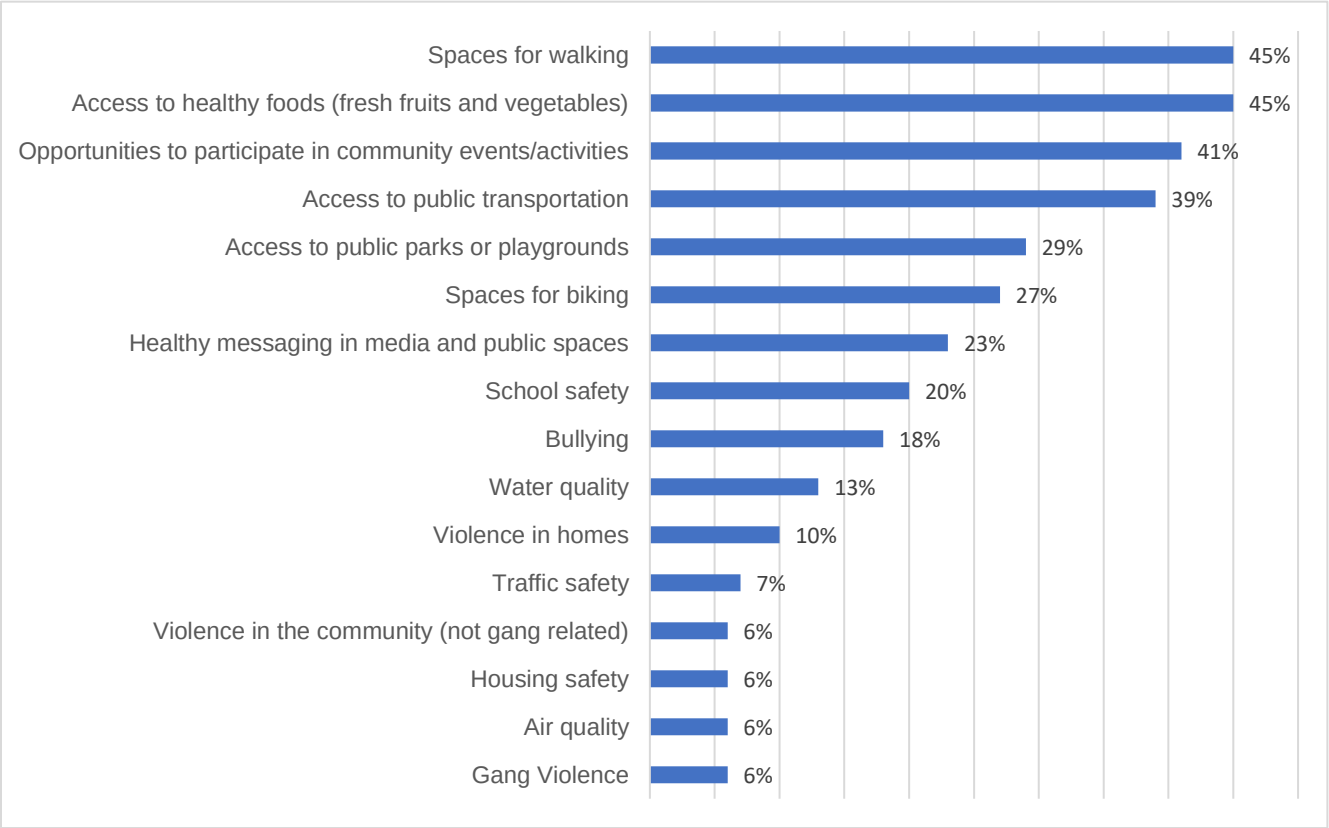


If yes, which cancer supports are needed? (n=39)				
9 Hospice and Home Health	8 Education/Information on the treament process and options	8 Social/Emotional Support Services	5 Financial Assistance	5 Transportation and Services Provided Locally

F. Neighborhood and Community Environment

Community residents were asked to review a list of common community health needs and concerns and identify which of these areas need improvement in their community. As shown in **Exhibit 1.8**, the most commonly identified neighborhood and community needs are spaces for walking, access to healthy foods and opportunities to participate in community events/activities.

Exhibit 1.8
Neighborhood and Community Environment (n=143)



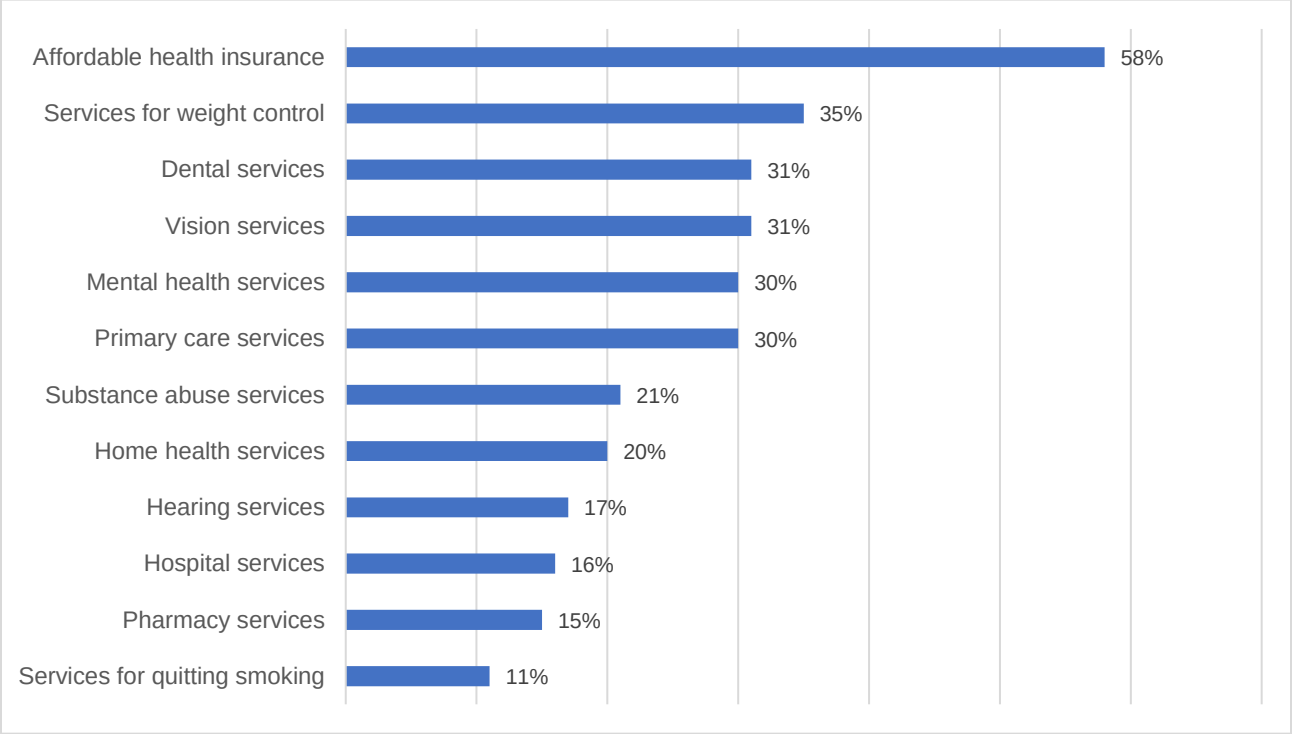
Additonal Comments:

- Need more choice in grocery stores
- I live in the country. No problems except the neighbors are Trumpets
- Not a lot of youthful activities like rollerskating
- Need Covid shots ASAP
- All important in our rural area
- Testing well water
- Poverty
- One thing I do for exerecise is to play tennis. The local courts could use some improvement.
- Limited internet access
- Access to WIFI
- I do not believe the community and VCU hospital provides enough preventive services for the elderly. We are in much need of a indoors walking track with hand rails.

G. Health Care Service Needs

Community residents were asked to review a list of common health services, and identify which services need strengthening in their community. As shown in **Exhibit 1.9,** the most commonly identified health care service needs were affordable health insurance; services for weight control; dental services; vision services; mental health services; and primary care services.

Exhibit 1.9
Health Care Service Needs (n=142)



Additional Comments:

- Dr availability
- Medicare requires that durable medical equipment companies have in their possession detailed written orders, face to face chart notes and those items must meet Medicare guidelines before the equipment can be delivered to the patient. If providers used electronic portals (such as GoScripts or Parachute) to send the required documentation, rather than the obsolete technology of fax machines, lives could be saved as well as money. Faxing often fails. The copies are muddy and hard to see. Often, they don't even show up! Electronic prescribing portals (GoScripts) make sure the order is correct, the documentation meets Medicare guidelines, has no costs and only benefits. It reduces the workload on your staff, the staff of the dme company & can help the patient get the equipment the same day! AeroCare, Clay Home Medical, Atlantic Medical, etc. in South Hill, Petersburg & Richmond can tell you more.
- More 24 Hr Urgent Care centers in the rural areas
- Longer pharmacy hours
- Exercise
- Affordable fitness centers, more physical activities for youth e.g., YMCA swimming
- Exercising- water aerobics

--Continued on the following page--

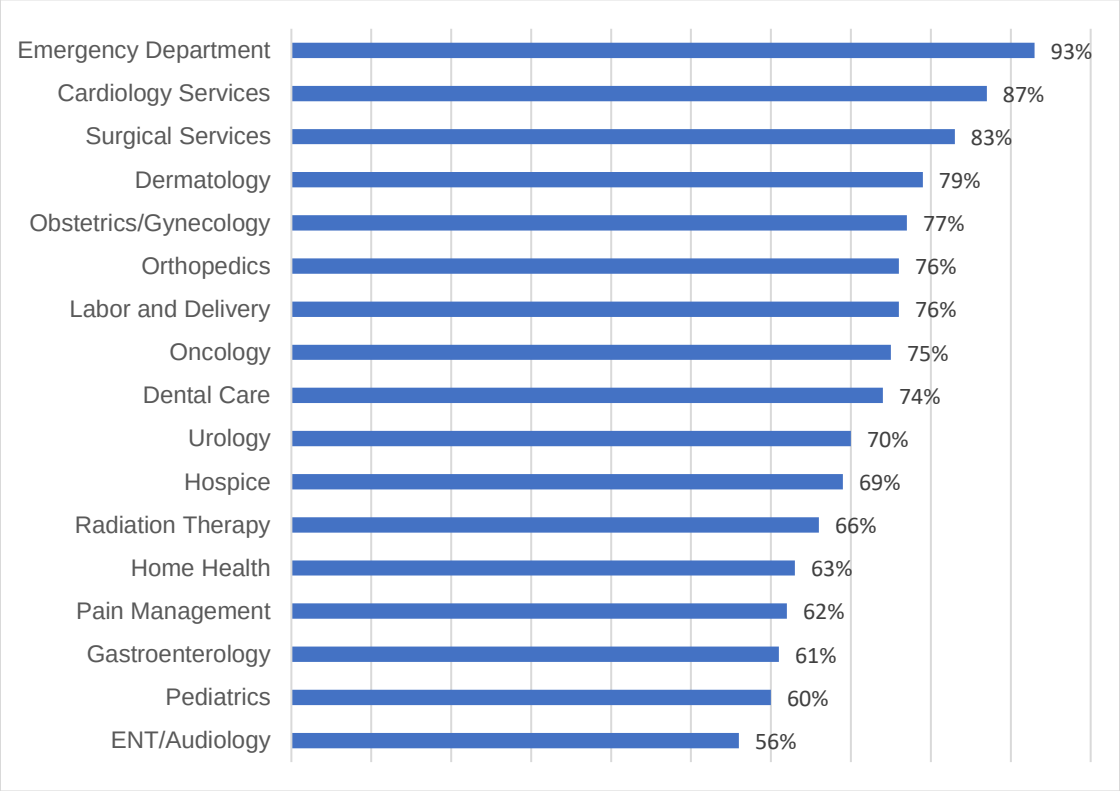
Exhibit 1.9
Health Care Service Needs (n=142)

- Your emergency dept is in desperate need of case management or at least one that is in call for community services for people. So many elderly or disabled get sent home without proper care only to end right back in the emergency room again just because they didn't qualify for an admission. Lack of mental health services for follow up care for patients that do not meet the criteria to be sent to another facility. Lack of detox and rehab services for people that go to the emergency room begging to be helped on getting clean safely. Instead, they are sent home and told to follow up with their primary care provider. And lastly, times are difficult, and many cannot afford a vehicle so then call ems to get health care through the emergency room but then get stuck there without a way home due to not qualifying insurance wise to be transported home. Some people do not have anyone to pick them up! We have no bus system like cities do and this area is very spread out so not within walking distance. Not to mention they are not feeling well and have to deal with more stress on how they can get home. No taxis here either. This community is so behind on times.
- Affordable prescriptions
- Primary care in Brunswick County
- Arthritis
- Safe activities for the elderly.

H. VCUHS CMH Services

Survey respondents were asked whether they were aware of hospital services offered at VCUHS CMH. As shown in **Exhibit 1.10**, most respondent (56%) aware of all services offered.

Exhibit 1.10
Awareness of VCUHS CMH Services
(n=196)



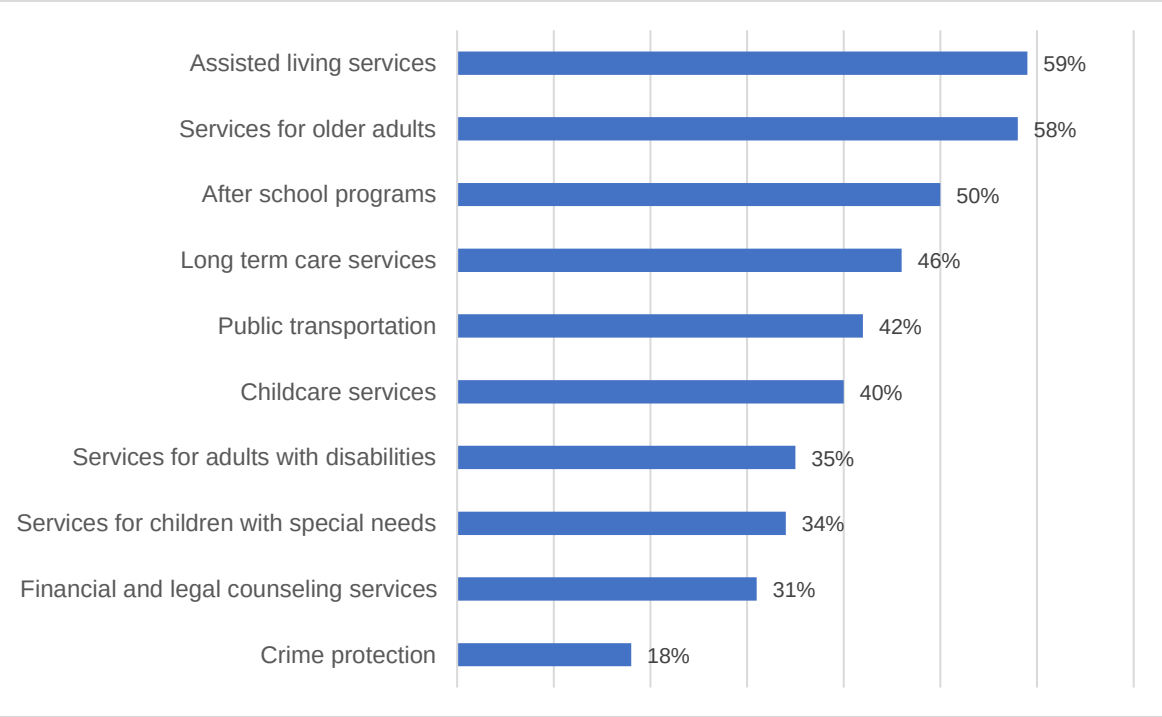
Additional Comments:

- P/T & O/T
- Respiratory rehab & education
- Vision
- Being a volunteer am well versed in what is offered.
- Movement Disorders
- Covid shots
- Preventive programs should be more widespread and known to help the community mitigate health issues
- Acupuncture
- Mental Health-psychiatry
- Need GI specialist
- A gastroenterologist is needed
- Pulmonology
- VCU-CMH does a good job of offering a large variety of specialties. I do not see Physical Therapy/Rehab on the list. I thoroughly enjoyed using the Hendrick Center for exercise, but no longer qualify for those services there. The staff was most helpful and provided a level of encouragement and comfort while I was utilizing the facility to help manage my blood pressure.
- I am happy to see the recent addition of specialist services.
- Preventative Care

I. Community Services

Community residents were asked to review a list of common community support services and identify which of those services need strengthening in their community. As shown in **Exhibit 1.11**, over 40% of respondents identified assisted living services; services for older adults; after school programs; long term care services; and public transportation as needing improvement.

Exhibit 1.11
Community Services that Need Strengthening
(n=161)



J. In Their Own Words – Insights from Community Residents

Community residents were asked to share in their own words their insights on the health and well-being of their community. **Exhibit 1.7** presents a summary of the **most common themes** and the associated number of responses. The most common themes are provided as a summary illustration, but they do not represent all the responses provided. The detailed responses are provided under separate cover.

Exhibit 1.12
In their Own Words – Insights from Community Resident Survey Respondents

1. How would you define a healthy community? (n=112)				
68 Access to Healthcare Services Medical, Dental, Behavioral Health	43 Access to Community & Social Services	31 Supports for Healthy Lifestyles	11 Supports for Elderly Population	10 Supports for People with Behavioral Health Concerns

2. Are there particular groups of people within your neighborhood or community who need help obtaining better health? (n=102)				
49 Elderly Population	47 Those with Limited Access to Services	23 Low Income Population	23 Populations with Health Equity Barriers	9 Children

3. Are there any new health issues within your neighborhood or community that others may not be aware of, but could cause serious harm today or in the future? (n=84)				
22 COVID-19 Issues	15 Access to Health Care Issues	11 Behavioral Health Issues	6 Unhealthy Lifestyle Issue	6 Community and Social Services Access Issues

4. In your view, what are the people, places or things that contribute the most to better health in your neighborhood or community? (n=111)			
68 Healthy Lifestyle Supports	53 Healthcare Services	21 Community & Social Services	16 Supports for Elderly Residents

5. Please share your ideas about how people could work together to promote better health in your neighborhood or community (n=77)			
21 Community Engagement	20 Healthcare Services	16 Community and Social Services	6 COVID-19 Response

6. Do you have any ideas on how local organizations can help you and others in your neighborhood or community achieve better health? (n=95)				
31 Healthcare Services	16 Supports for Healthy Lifestyles	15 Community & Social Services	9 COVID-19 Response Efforts	21 Supports for Elderly Residents

Section 2. Insights from Community Professionals

In addition to the survey of community residents described in Section 1, a second *Community Insight Survey* was conducted with a group of community professionals identified by VCUHS CMH staff. This section describes the methods, summary results, and detailed results for each section of the survey.

A. Survey Methods

The survey was conducted online with a pool of potential respondents identified by VCUHS CMH from their existing lists of community contacts. This included local representatives from public health, social services, local nonprofits, faith-based organizations, and the private business community via outreach from the local chambers of commerce. One section of the survey included questions about community needs related to COVID-19. The other sections asked respondents for their insights about community health issues beyond COVID-19. A total of 47 individuals submitted a response (although not every respondent answered every question).

B. Organizational Affiliation and Geographic Perspective

Survey responses were received from 85 community professionals from the organizations listed in **Exhibit 2.1**. Each respondent was asked to describe their geographic perspective in terms of the counties for which they would share insights on the survey. Most respondents identified multiple counties.

Exhibit 2.1
Organizational Affiliation and Geographic Perspective
(n=85)

By Organization
(A count denotes multiple respondents from the same organization.)

- AmeriCare plus
- Benchmark Community Bank
- Blackstone Chamber of Commerce
- Brunswick County Department of Social Services
- Brunswick County IDA
- Brunswick Insurance Agency Corp
- Building Blocks to Success LLC
- Caring Hearts Academy
- Chase City Chamber
- Commonwealth Home Health, Inc. AND Personal HomeCare, Inc.
- County of Brunswick
- County of Nottoway VA
- Crowder-Hite-Crews Funeral Home
- Healthy Lifestyles
- HGW Watkins Insurance
- Lake Country Area Agency on Aging
- Lakeside HR
- Lunenburg County
- MacCallum More Museum and Gardens
- Materials Management
- Mecklenburg County Economic Development
- Mecklenburg County Public Schools
- MORNINGSTAR'S BED BATH & CURTAIN OUTLET
- MyEyeDr
- Occoneechee Chapter of AARP
- Pointe Realty Group (2)
- Realtor (Coldwell Banker Advantage)
- Robert Harrs Photography
- RZUA CHURCHES OF AMERICA (6)
- South Central Workforce Development Board
- Southside Behavioral Health
- Southside Community Services Board
- Southside VA Community College
- St.Taylor RZUA
- State Senate
- Three Sisters Winery
- Town of Brodnax
- Union Meherrin Church
- USCG AUXILIARY
- VCUHS Community Memorial Hospital (31)
- Virginia Career Works
- Virginia Cooperative Extension
- Virginia Employment Commission
- Watkins Insurance
- WMS ENTERPRISES
- Unknown (2)
- Unknown Church (2)

By Geographic Perspective
(Can select multiple)

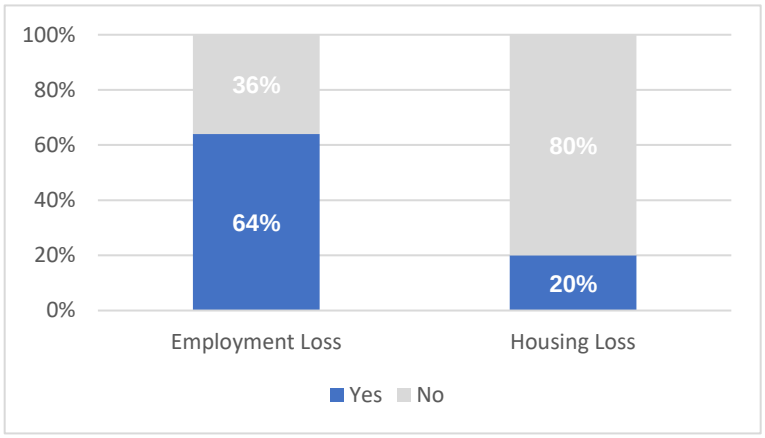
Brunswick County, VA	58%
Lunenburg County, VA	42%
Mecklenburg County, VA	80%
Nottoway County, VA	39%
Warren County, NC	33%

C. Community Needs Related to COVID-19

Community professionals were asked to share their insights on community needs specifically related to COVID-19. As shown in **Exhibit 2.2**, 64% said they have seen an increase in employment loss due to COVID-19, and 20% said they have seen an increase in housing loss. Survey respondents identified multiple groups that need extra help due to COVID-19. They also shared their perceptions of client/consumer difficulty as shown in the bottom panel.

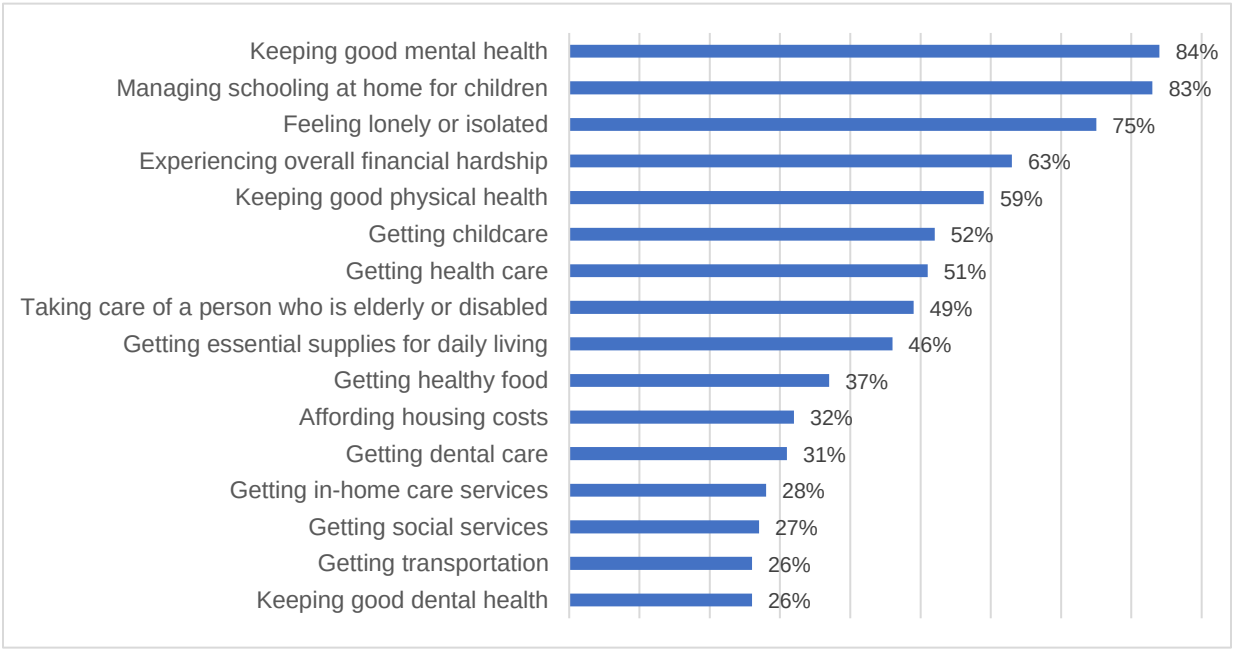
Exhibit 2.2
Community Needs Related to COVID-19

Increase in Client/Consumer Employment (n=84) or Housing Loss (n=82)



Groups Who Need Extra Help (n=64)

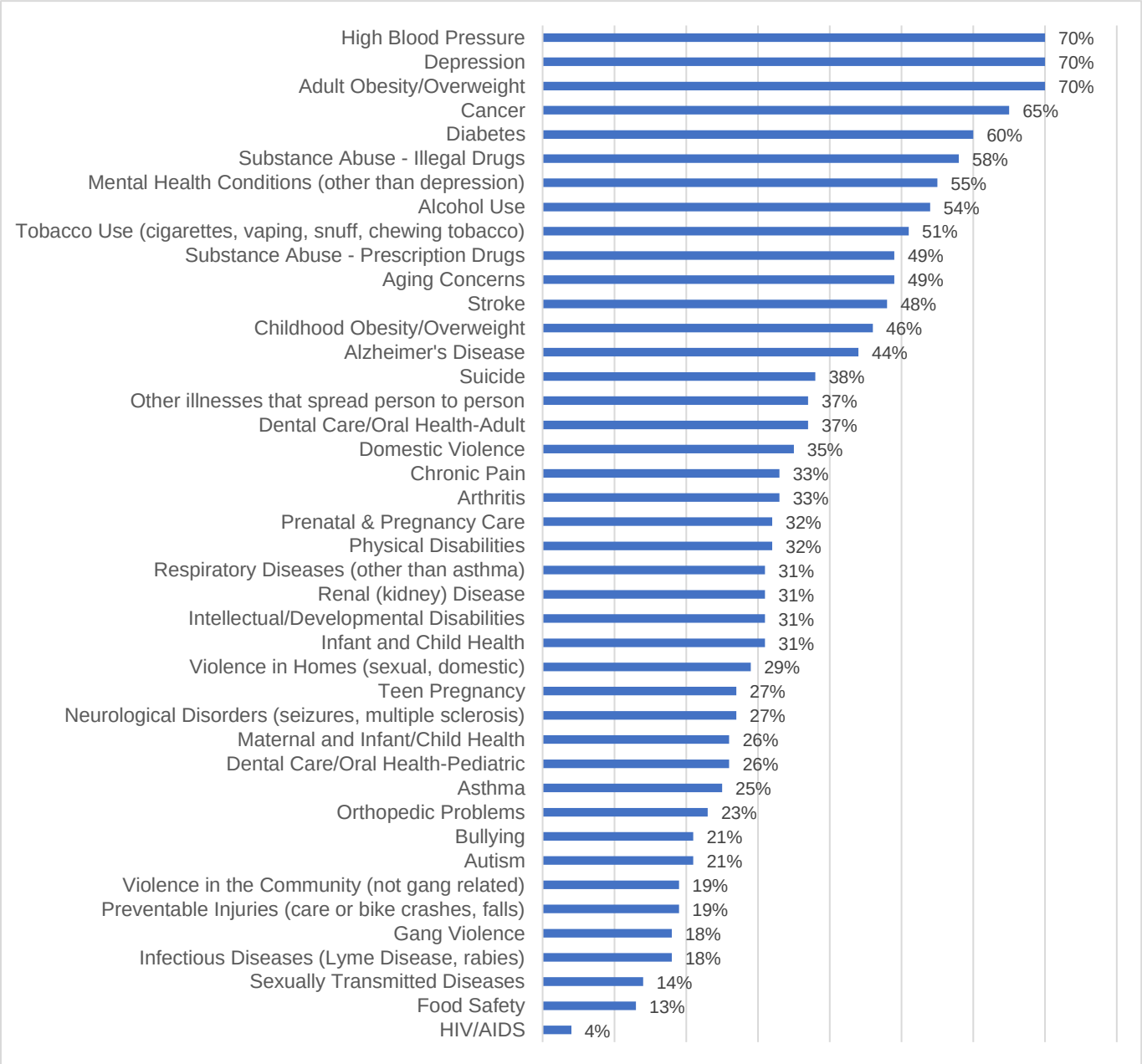
Client/Consumer Difficulties (n=81)



D. Community Health Concerns

Community professionals were asked to review a list of common community health needs and identify which of these needs are present in their community. As shown in **Exhibit 2.3**, the most commonly identified concerns were high blood pressure; depression; adult obesity/overweight; cancer; and diabetes.

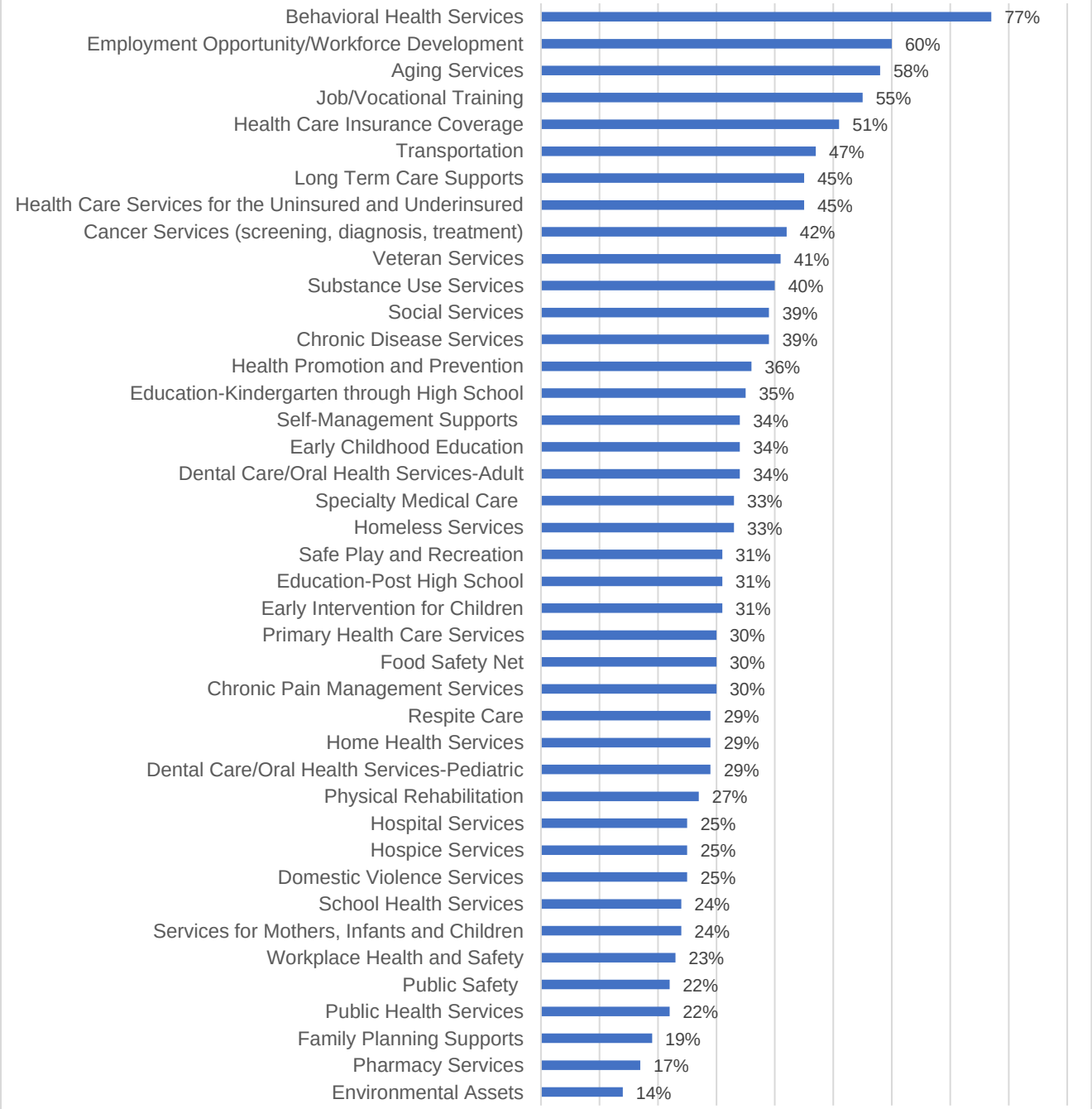
Exhibit 2.3
Community Health Concerns
(n=84)



E. Services and Supports that Need Strengthening

Community professionals were asked to review a list of common community services and supports and identify which of those services need strengthening in their community. As shown in **Exhibit 2.4**, the most commonly mentioned services that need strengthening include behavioral health services; employment opportunity/workforce development; aging services; job/vocational training; and health insurance coverage.

Exhibit 2.4
Services and Supports that Need Strengthening
(n=83)



F. In Their Own Words – Insights from Community Professionals

Community professionals were asked to share in their own words their insights on the health and well-being of their community. **Exhibit 2.5** provides a summary of the **most common themes** and the associated number of responses. The most common themes are provided as a summary illustration, but they do not represent all the responses provided. The detailed responses are provided under separate cover.

Exhibit 2.5
In their Own Words – Insights from Community Professionals

1. In your own words, how would you define the idea of a "healthy community"? (n=59)				
39 Access to Healthcare (Medical, Dental, Behavioral)	32 Healthy Lifestyle Supports	18 Access to Community & Social Services	17 Supports for People with Behavioral Health Concerns	6 Health Equity

2. In your view, what are the most important health assets within the community? (n=58)				
33 Healthy Lifestyle Supports	24 Healthcare Services	15 Community and Social Services	9 Supports for Children	4 Supports for Elderly; Community Engagement

3. Are there any new health issues within the community that may not be widely known yet, but could cause serious harm today or in the future? (n=35)				
12 Access to Healthcare Issues	11 Behavioral Health Issues	7 COVID-19 Issues	6 Child Health Issues; Community and Social Services; Unhealthy Lifestyle Issues	4 Senior Health Issues

4. Please share your ideas about how people could work together to promote optimal health in the community (n=47)				
16 Community and Social Services	13 Community Engagement	12 Healthcare Services	8 Healthy Lifestyle Supports; More Community Collaboration; Supports for People with Lifestyle Risk Factors	6 Supports for Children

5. Please share your additional ideas or suggestions (n=19)				
8 Healthy Lifestyle Supports	6 Address COVID-19 Needs	5 Health Care Services	4 Supports People with Behavioral Health Concerns	3 Community and Social Services; Community Engagement

Section 3. Community Indicator Profiles

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 to help inform action plans for community health improvement.

The community data profiles are organized into two sections as outlined below. Health factors include demographics and other factors that can influence health status and access to health care for community populations. Health outcomes are indicators of the health status of community members.

Health Factor Profiles	Health Outcome Profiles
A. Community Demographics B. Social Determinants of Health C. Health Risk Behaviors for Adults D. Health Risk Behaviors for Youth E. Access to Health Care	F. Leading Causes of Death G. Maternal and Infant Health H. Injury and Violence I. Preventable Hospitalizations J. Mental Health and Substance Use Hospitalizations

A. Health Factors: Community Demographics

Trends in health-related demographics are instructive for anticipating changes in community health status. Changes in the size, age and racial/ethnic mix of the population can have a significant impact on overall health status, health needs and demand for local services.

As shown in **Exhibit 3.0**, as of 2020, the study region included an estimated 97,081 people. The population is expected to decrease slightly to 95,804 by 2025. Focusing on trends from 2020 to 2025, projections indicate the population will decrease or remain steady for most age groups, except 30-44 and 65+, which are expected to increase. Focusing on race and ethnicity, growth is expected within the Asian, Other or Multi-Race, and Hispanic population groups, with declines expected in the White and Black/African American population segments.

Exhibit 3.0
Community Demographics-Trend (2010-2020)

Indicator		2010 Census	2020 Estimate	2025 Projection	% Change 2020-2025
Total Population	Population	97,387	97,081	95,804	-1%
	Households	91,881	92,418	91,145	-1%
Age	Children Age 0-17	14,688	17,196	16,844	-2%
	Adults Age 18-29	17,928	17,832	17,814	0%
	Adults Age 30-44	16,530	16,216	16,535	2%
	Adults Age 45-64	29,505	27,252	18,609	-32%
	Seniors Age 65+	18,736	23,248	26,002	12%
Race	Asian	397	607	720	19%
	Black/African American	39,968	37,771	36,306	-4%
	White	53,191	53,675	53,207	-1%
	Other or Multi-Race	3,833	5,028	5,571	11%
Ethnicity	Hispanic Ethnicity	2,619	3,673	4,107	12%

Source: Community Health Solutions analysis of data from US Census Bureau and ESRI. See Appendix A: Data Sources for details

Exhibit 3.1 provides a demographic profile snapshot of key health-related demographics of the study region. As of 2020, the study region included an estimated 97,081 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 proportionally more Black/African American residents.

Exhibit 3.1
Community Demographics-Snapshot (2020)

Indicator		Study Region Total	Virginia
Estimated Counts			
Total Population	Population	97,081	8,684,166
Age	Children Age 0-17	12,533	1,857,391
	Adults Age 18-29	17,832	1,425,254
	Adults Age 30-44	16,216	1,728,750
	Adults Age 45-64	27,252	2,272,656
	Seniors Age 65+	23,248	1,400,115
Sex	Female	48,379	4,411,676
	Male	48,702	4,272,490
Race	Asian	607	609,644
	Black/African American	37,771	1,687,062
	White	53,675	5,667,763
	Other or Multi-Race	5,028	719,697
Ethnicity	Hispanic Ethnicity	3,673	880,213
Estimated Rates			
Total Population	Population Density (pop. per sq. mile)	38.6	219.9
Age	Children Age 0-17 pct. of Total Pop.	13%	21%
	Adults Age 18-29 pct. of Total Pop.	18%	16%
	Adults Age 30-44 pct. of Total Pop.	17%	20%
	Adults Age 45-64 pct. of Total Pop.	28%	26%
	Seniors Age 65+ pct. of Total Pop.	24%	16%
Sex	Female pct. of Total Pop.	50%	51%
	Male pct. of Total Pop.	50%	49%
Race	Asian pct. of Total Pop.	1%	7%
	Black/African American pct. of Total Pop.	39%	19%
	White pct. of Total Pop.	55%	65%
	Other or Multi-Race pct. of Total Pop.	5%	8%
Ethnicity	Hispanic Ethnicity pct. of Total Pop.	4%	10%

Source: Community Health Solutions analysis of data from ESRI. See Appendix A: Data Sources for details

B. Health Factors: Social Determinants of Health

Exhibit 3.2 shows selected social determinants of health for residents of the study region versus Virginia as a whole. Social determinants of health are social and economic factors that can influence health and access to health care for individuals and populations. These factors can impact an individual's health status and access to health services and supports. The results show there are substantial numbers of community residents with low income, without a high school diploma, with food insecurity, and housing problems.

Exhibit 3.2
Social Determinants of Health (Various Years)

Indicator		Study Region Total	Virginia
Estimated Counts			
Income	Households with Incomes Below the Poverty Level (2019)	6,404	323,273
Education	Population Age 25+ Without a High School Diploma (2020)	13,381	593,336
Estimated Rates			
Income	Households with Incomes Below the Poverty Level (2019) pct. of Total Household for Which Poverty Status is Determined (2019)	18%	10%
	Median Household Income (2020)	$43,060	$73,543
	Per Capita Income (2020)	$23,966	$40,095
Education	Population Age 25+ Without a High School Diploma pct. of Total Pop. Age 25+ (2020)	18%	10%

Source: Community Health Solutions analysis of data from US Census Bureau and ESRI.
See Appendix A: Data Sources for details.

C. Health Factors: Risk Behaviors for Adults

Exhibit 3.3 shows selected health risk behaviors for adults for residents of the study region versus Virginia as a whole. Health risk behaviors include lifestyle factors that can influence health including development of chronic disease. Please note that these figures are estimates derived by applying 2018/2019 health district estimates to 2020 local demographics for the study region. They are subject to error and presented for planning purposes only. The results show there are substantial numbers of community residents who could reduce their health risks by improving their diet, reducing their body weight, engaging in physical activity, reducing alcohol consumption, and ceasing smoking.

Exhibit 3.3
Adult Health Risk Behaviors (2020 Estimates)

Indicator		Study Region Total	Virginia
Counts			
Total Estimated Adults age 18+		79,885	6,826,775
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	67,103	5,734,491
	Overweight or Obese	61,511	4,505,672
	No Physical Activity in the Past 30 Days	30,356	1,706,694
	At-risk for Binge Drinking[2]	11,983	1,024,016
	Smoker	16,776	955,749
Chronic Conditions[3]	High Cholesterol	31,954	2,252,836
	High Blood Pressure	35,149	2,321,104
	Arthritis	32,753	1,774,962
	Diabetes	15,977	750,945
General Health Status	Fair or Poor Health Status	15,977	1,160,552
Rates			
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	84%	84%
	Overweight or Obese	77%	66%
	No Physical Activity in the Past 30 Days	38%	25%
	At-risk for Binge Drinking	15%	15%
	Smoker	21%	14%
Chronic Conditions	High Cholesterol	40%	33%
	High Blood Pressure	44%	34%
	Arthritis	41%	26%
	Diabetes	20%	11%
General Health Status	Fair or Poor Health Status	20%	17%

Source: Community Health Solutions analysis of data from Virginia Department of Health Behavioral Risk Factor Surveillance System and demographic estimates from ESRI. See Appendix A: Data Sources for details

[2] Males having five or more drinks on one occasion, females having four or more drinks on one occasion.
[3] As told by a doctor or other health professional

D. Health Factors: Risk Behaviors for Youth

Exhibit 3.4 shows selected health risk behaviors for youth for residents of the study region versus Virginia as a whole. Please note that all indicators in this profile are based on 2019 health district estimates applied to 2020 regional demographics for the study region. They are subject to error and presented for planning purposes only. The results show there are substantial numbers of community youth who could reduce their health risks by avoiding tobacco and vapor products, engaging in more physical activity, and sustaining healthier body weight.

Exhibit 3.4
High School Youth Health Risk Behaviors (2020 Estimates)

Indicator		Study Region Total	Virginia
Counts			
Total Estimated High School Youth Age 14-19		5,938	652,253
Lifestyle Risk Factors	Used tobacco or vapor products in the past month	1,366	150,018
	Not Meeting Recommendations for Physical Activity in the Past Week	3,563	384,829
Chronic Conditions	Asthma	1,544	136,973
	Overweight or Obese	2,019	202,198
Rates			
Lifestyle Risk Factors	Used tobacco or vapor products	23%	23%
	Not Meeting Recommendations for Physical Activity in the Past Week	60%	59%
Chronic Conditions	Asthma	26%	21%
	Overweight or Obese	34%	31%

Source: Community Health Solutions analysis of data from Virginia Department of Health Youth Risk Behavior Surveillance System and demographic estimates from ESRI. See Appendix A: Data Sources for details

E. Health Factors: Access to Health Care

Access to health care is essential for individual and population health. **Exhibit 3.5** provides indicators of access to health insurance for community residents. As shown, an estimated 9,726 community members age 0-64 may lack health coverage. Looking beyond health coverage, **Exhibit 3.6** shows that all six counties that overlap with the study region have been designated as medically underserved areas by the U.S. Health Resources and Services Administration. The designations are based on several factors including primary care provider supply, infant mortality, prevalence of poverty and the prevalence of seniors age 65+.

Exhibit 3.5
Uninsured Population (2019 Estimates)

Indicator	Study Region	Virginia
Estimated Counts - Population		
Total Population Age 0-64	69,082	6,989,043
Total Population Age 0-18	18,824	1,981,506
Total Population Age 19-64	50,258	5,007,537
Estimated Counts - Uninsured		
Uninsured Population Age 0-64	9,726	696,457
Uninsured Population Age 0-18	1,090	99,819
Uninsured Population Age 19-64	8,636	596,638
Estimated Rates - Uninsured		
Uninsured Population Age 0-64	14%	10%
Uninsured Population Age 0-18	6%	5%
Uninsured Population Age 19-64	17%	12%

Notes: These data may reflect conservative estimates of health coverage for 2018. Readers are encouraged to review current data on Medicaid Expansion enrollment that which updated on a regular basis. Click here view the Department of Medical Assistance Services Medicaid Expansion Access Dashboard.

Source: Community Health Solutions analysis of data from ACS. See Appendix A: Data Sources for details

Exhibit 3.6
Medically Underserved Areas/Populations

Locality	Index of Medical Underservice Score (0= Highest Need 100 =Lowest Need)	Rural Status
Brunswick County, VA	57.9	Rural
Charlotte County, VA	58.0	Rural
Lunenburg County, VA	51.2	Rural
Mecklenburg County, VA	59.9	Rural
Nottoway County, VA	52.9	Rural
Warren County, NC	30.4	Rural

Source: Community Health Solutions analysis of data from Health Resources and Services Administration. See Appendix A: Data Sources for details

F. Health Outcomes: Leading Causes of Death

Exhibit 3.7 shows the leading causes of death for residents of Virginia zip codes within the study region (versus Virginia as a whole. In 2019 the five leading causes of death in the study region were heart disease (216), malignant neoplasms (cancer) (210), cerebrovascular disease (stroke) (65), chronic lower respiratory disease (55), and unintentional injury (52). Crude mortality rates for the study region were higher than the Virginia rate for causes of death where a rate was calculated.

Exhibit 3.7
Mortality (2019)

Indicator	Study Region (VA zip codes only)	Virginia
Counts		
Total Deaths by All Causes	1,058	70,359
Heart Disease	216 (20%)	15,061 (21%)
Malignant Neoplasms (Cancer)	210 (20%)	15,049 (21%)
Cerebrovascular Disease (Stroke)	65 (6%)	3,823 (5%)
Chronic Lower Respiratory	55 (5%)	3,666 (5%)
Unintentional Injury	52 (5%)	3,997 (6%)
Diabetes	50 (5%)	2,352 (3%)
Alzheimer's Disease	37 (3%)	2,632 (4%)
Nephritis and Nephrosis	28 (3%)	1,662 (2%)
Septicemia	26 (2%)	1,086 (2%)
Primary Hypertension	22 (2%)	817 (1%)
Chronic Liver Disease	17 (2%)	1,038 (1%)
Influenza and Pneumonia	15 (1%)	1,103 (2%)
Parkinson's Disease	10 (1%)	894 (1%)
Suicide	9 (1%)	1,137 (2%)
Rates (Crude Rate Per 100,000 Population)		
Total Deaths by All Causes	1,370.5	824.3
Heart Disease	279.8	176.5
Malignant Neoplasms (Cancer)	272.0	176.3
Cerebrovascular Disease (Stroke)	84.2	44.8
Chronic Lower Respiratory	71.2	42.9
Unintentional Injury	67.4	46.8
Diabetes	64.8	27.6
Alzheimer's Disease	47.9	30.8
Nephritis and Nephrosis	--	19.5
Septicemia	--	12.7
Primary Hypertension	--	9.6
Chronic Liver Disease	--	12.2
Influenza and Pneumonia	--	12.9
Parkinson's Disease	--	10.5
Suicide	--	13.3

-- Rates are not calculated where the number of cases is less than 30.
Source: Community Health Solutions analysis of data from the Virginia Department of Health.
See Appendix A: Data Sources for details

G. Health Outcomes: Maternal and Infant Health

Exhibits 3.8A and 3.8B show indicators of maternal and infant health for residents of Virginia zip codes within the study region versus Virginia as a whole. As shown in **Exhibit 3.8A**, in 2019 there were 705 total live births, with 73 low weight births, 119 births without early prenatal care, 400 non-marital births, and 29 births to teens. The study region had higher rates of low weight births, and non-marital births than Virginia as a whole.

Exhibit 3.8A
Maternal and Infant Health (2019)

Indicator	Study Region (VA zip codes only)	Virginia
Counts		
Total Live Births	705	97,434
Low Weight Births	73	8,162
Births Without Early Prenatal Care (No Care in the First 13 Weeks)	119	16,122
Non-Marital Births	400	34,196
Teenage Births (Age 10-19)	29	3,587
Teenage Births (Age 18-19)	21	2,748
Teenage Births (Age 15-17)	8	811
Teenage Births (Age <15)	0	28
Rates		
Live Birth Rate per 1,000 Population	9.1	11.4
Low Weight Births as a pct. of Total Births	10%	8%
Births Without Early Prenatal Care as a pct. Of Total Births	17%	17%
Non-Marital Births as a pct. of Total Births	57%	35%
Teenage Births (Age 10-19) Rate per 1,000 Females age 10-19	6.4	6.8
Teenage Births (Age 18-19)	23.7	24.6
Teenage Births (Age 15-17)	6.0	5.2
Teenage Births (Age <15)	0.0	0.1

Source: Community Health Solutions analysis of data from Virginia Department of Health. See Appendix A: 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.[4] As an approximation, **Exhibit 3.8B** on the following page shows counts and rates of infant mortality and teen pregnancy for the five counties that overlap the study region (Virginia Localities only). The five-year average infant mortality rates and teen pregnancy rates were higher than the statewide rate for Brunswick, Mecklenburg and Nottoway counties.

[4] 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 3.8B
Infant Mortality and Teen Pregnancy

Indicator	Brunswick	Charlotte	Lunenburg	Mecklenburg	Nottoway	Virginia
Counts						
Five Year Infant Deaths (2015-2019)	8	8	4	20	7	2,917
Total Teenage (age 10-19) Pregnancies (2019)	9	6	4	18	9	4,825
Rates						
Five-Year Average Infant Mortality Rate per 1,000 Live Births (2015-2019)	11.6	11.9	6.7	13.0	9.5	5.8
Teenage (age 10-19) Pregnancy Rate per 1,000 Teenage Female Population (2019)	12.3	8.8	6.6	11.4	11.1	9.2

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

H. Heath Outcomes: Injury and Violence Hospitalizations

Exhibit 3.9 shows hospitalizations due to selected injury and violence for residents of Virginia zip codes within the study region versus Virginia as a whole. In 2018 study region residents had 443 inpatient hospitalizations for injury or violence-related incidents, with the leading causes being unintentional fall (112), firearm (88), drug poisoning due to overdose (88), traumatic brain injury (82), and self-harm (35). Crude hospitalization rates were higher for the study region than Virginia for each of these causes except self-harm.

Exhibit 3.9
Injury and Violence-Hospitalization (2018)

Indicator	Study Region (VA zip codes only)	Virginia
Counts-Injury and Violence Related Discharges		
Injury and Violence Related Discharges	443	32,021
Unintentional Fall	112	7,234
Firearm	88	6,156
Drug Poisoning (Overdose)	88	7,155
Traumatic Brain Injury	82	5,438
Self-harm	35	3,622
Motor Vehicle Injury	19	881
Poisoning (non-drug)	15	1,310
Assault	4	225
Rates- Crude Rate Per 100,000 Population		
Injury and Violence Related Discharges	57.4	37.5
Unintentional Fall	14.5	8.5
Firearm	11.4	7.2
Drug Poisoning (Overdose)	11.4	8.4
Traumatic Brain Injury	10.6	6.4
Self-harm	4.5	4.2
Motor Vehicle Injury	--	1.0
Poisoning (non-drug)	--	1.5
Assault	--	0.3

-- Rates are not calculated where the number of discharges is less than 30.

Source: Community Health Solutions analysis of data from Virginia Health Information, Inc. and demographic estimates from ESRI. See Appendix A: Data Sources for details

I. Health Outcomes: Potentially Avoidable Hospitalizations

Exhibit 3.10 shows indicators of potentially avoidable hospitalizations for residents of Virginia zip codes within the study region versus Virginia as a whole. These hospitalizations are potentially avoidable with adequate access to outpatient care and other health supports. Cases are defined using specific diagnosis and procedure codes as noted in **Appendix A**.

In 2019 study region residents had 1,219 potentially avoidable hospitalizations, with most being for residents age 65+. The leading diagnoses for these hospitalizations were congestive heart failure (526), diabetes (244), COPD or asthma in older adults (213), community acquired pneumonia (94), and urinary tract infection (88). The crude rates for these hospitalizations were higher in study region than for Virginia as a whole.

Exhibit 3.10
Potentially Avoidable Hospitalizations (2019)

Indicator	Study Region (VA zip codes only)	Virginia
Counts- Discharges by Diagnosis		
Total PQI Discharges by All Diagnoses	1,219	72,248
Congestive Heart Failure	526 (43%)	26,675 (37%)
Diabetes	244 (20%)	13,561 (19%)
COPD or Asthma in Older Adults	213 (17%)	12,198 (17%)
Community Acquired Pneumonia	94 (8%)	8,514 (12%)
Urinary Tract Infection	88 (7%)	7,481 (10%)
Hypertension	47 (4%)	3,292 (5%)
Asthma in Younger Adults	7 (1%)	538 (1%)
Rates-Crude Rate Per 100,000 Population		
Total Prevention Quality Indicator (PQI) Discharges	1,579.1	846.4
Congestive Heart Failure	681.4	312.5
Diabetes	316.1	158.9
COPD or Asthma in Older Adults	275.9	142.9
Community Acquired Pneumonia	121.8	99.7
Urinary Tract Infection	114.0	87.6
Hypertension	60.9	38.6
Asthma in Younger Adults	--	6.3

-- Rates are not calculated where the number of discharges is less than 30.

Source: Community Health Solutions analysis of data from Virginia Health Information, Inc. and demographic estimates from ESRI. See Appendix A: Data Sources for details

J. Health Outcomes: Mental Health and Substance Use Hospitalizations

Exhibit 3.11 shows that residents of Virginia zip codes within the study region had 376 discharges from Virginia community hospitals for behavioral health conditions in 2019. The leading causes of hospitalization were major depressive disorder - recurrent (91), major depressive disorder – single episode (50), bipolar disorder (48), alcohol related disorders (43), and schizoaffective disorders (42). The crude rates for most hospitalizations were lower in the study region than for Virginia as a whole.

Exhibit 3.11
Hospitalizations for Mental Health and Substance Use Diagnoses (2019)

Indicator	Study Region (VA zip codes only)	Virginia
Counts-Total Discharges by Diagnosis		
Total Discharges by All Diagnoses	376	68,583
Counts-Total Discharges by Leading 11 Diagnoses		
Major depressive disorder, recurrent	91	17,148
Major depressive disorder, single episode	50	6,790
Bipolar disorder	48	10,137
Alcohol related disorders	43	9,436
Schizoaffective disorders	42	6,521
Schizophrenia	21	3,229
Opioid related disorders	16	2,011
Persistent mood [affective] disorders	10	1,931
Reaction to severe stress, and adjustment disorders	9	2,287
Unspecified psychosis not due to a substance or known physiological condition	8	1,004
Unspecified mood [affective] disorder	7	1,485
Rates- Crude Rate Per 100,000 Population		
Total Discharges	487.1	796.8
Major depressive disorder, recurrent	117.9	197.5
Major depressive disorder, single episode	64.8	78.2
Bipolar disorder	62.2	116.7
Alcohol related disorders	55.7	108.7
Schizoaffective disorders	54.4	75.1
Schizophrenia	--	37.2
Opioid related disorders	--	23.2
Persistent mood [affective] disorders	--	22.2
Reaction to severe stress, and adjustment disorders	--	26.3
Unspecified psychosis not due to a substance or known physiological condition	--	11.6
Unspecified mood [affective] disorder	--	17.1

-- Rates are not calculated where the number of discharges is less than 30.

Source: Community Health Solutions analysis of data from Virginia Health Information, Inc. and demographic estimates from ESRI. See Appendix A: Data Sources for details

Section 4. Social Determinants of Health

Social determinants of health (SDoH) have been defined as the conditions under which people are born, grow, live, work, and age, and include factors such as socioeconomic status, education, employment, social support networks, and neighborhood characteristics.[5] A growing body of research indicates that SDoH can be linked to a lack of opportunity and resources to protect, improve, and maintain health. The impacts of SDoH can be seen in disparities in health status and access to healthcare for individuals and populations.

This section explores the results of the CHNA study from an SDoH perspective. Part A provides summary insights about SDoH from the survey of community residents. Part B presents a demographic profile of the region that may be helpful for understanding where populations with SDoH risk reside. This type of information can be helpful for planning efforts to reduce health disparities and increase health equity.

A. Insights from Surveys of Community Residents

Community residents were asked if there are particular groups of people within their neighborhood or community who need help obtaining better health. As shown in **Exhibit 4.1**, the most frequently identified populations are shown in the exhibit below, along with a list of specific mentions. Members of these populations have one or more social determinants of health that could influence their health status and access to health services and supports. The list is consistent with research on populations at higher risk for health challenges because of one or more social determinants of health.

Exhibit 4.1
Insights about Vulnerable Populations from Community Residents

Most Frequently Identified Populations in the Survey of Community Residents (n=102)

49 *Elderly Population*	*47* *Those with Limited Access to Services*	*23* *Low Income Population*	*23* *Populations with Health Equity Barriers*	*9* *Children*

Specific Populations Identified

- Children
- Elderly
- Hispanic/Latino
- Homeless
- Immigrants
- Low-income
- Parents homeschooling children
- People of color
- People with disabilities
- People with mental health conditions
- People with substance use problems
- People with transportation access needs
- Unemployed
- Underinsured/Uninsured

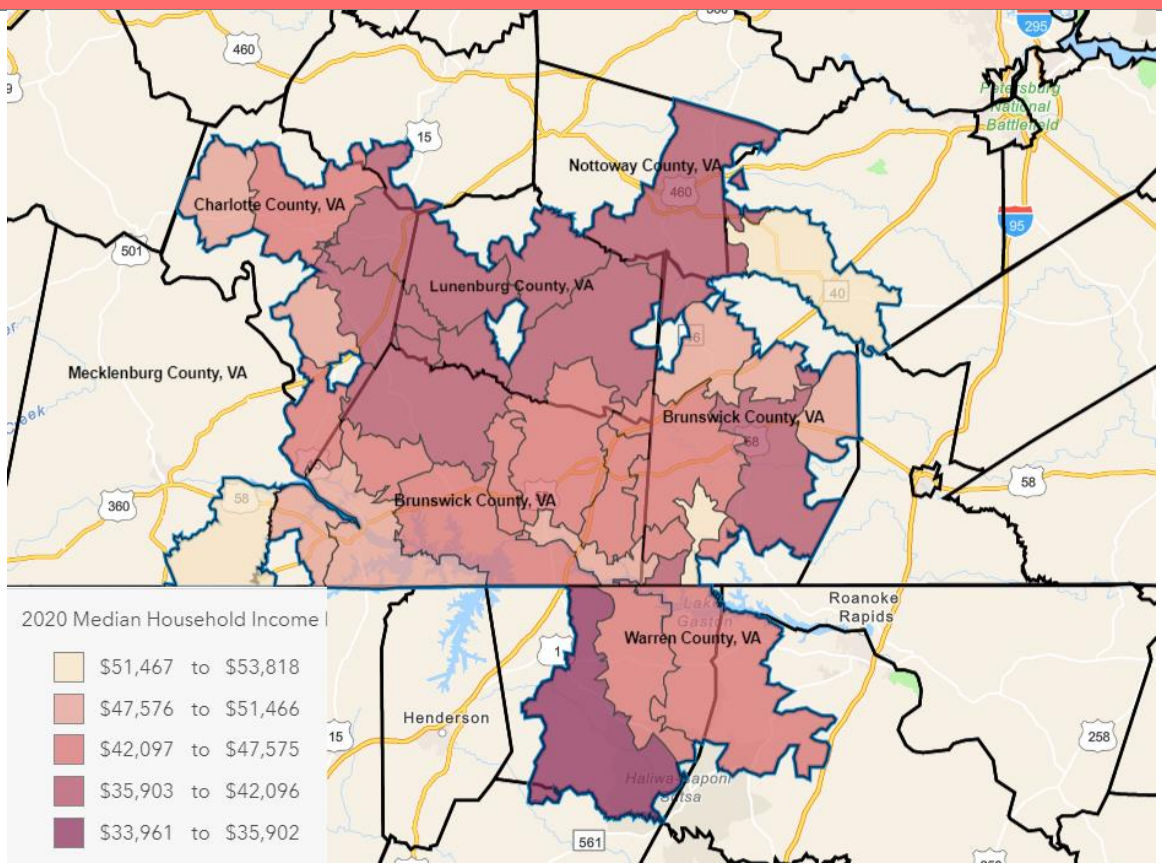
[5] American Academy of Family Physicians

B. Community Mapping of SDoH Indicators

For purposes of assessment and planning it is helpful to understand where populations with SDoH risk factors reside in the community. The following exhibits provide maps and data for four SDoH indicators including low income, minority status, disability, and aging. There are many additional SDoH not shown here. The indicators shown are intended as a starting point for further analysis of SDoH factors in local communities.

Exhibit 4.2 shows the estimated median household income at the zip code level as of 2020. The range expands from a low of $33,961 to a high of $53,818.

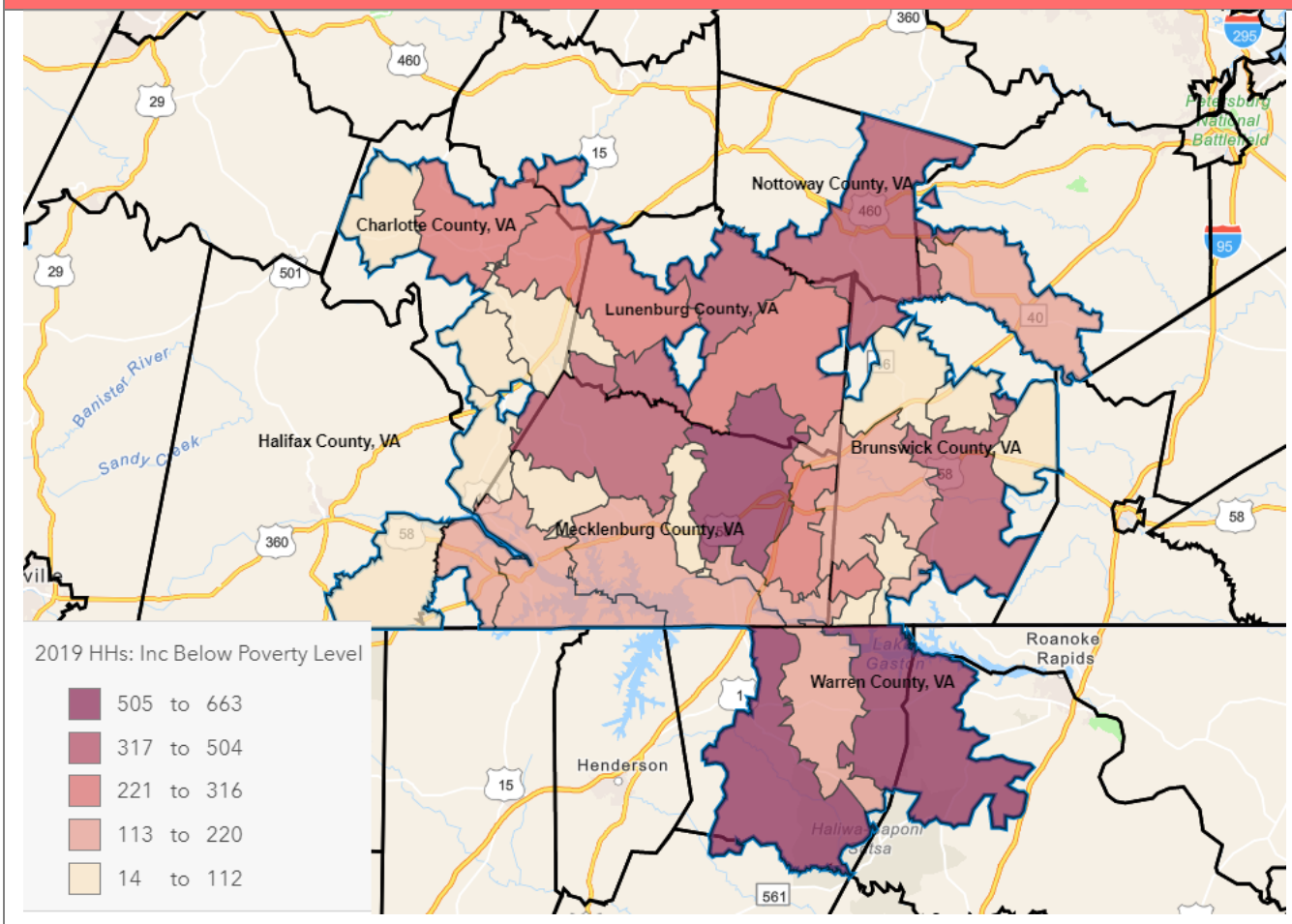
Exhibit 4.2
Median Household Income (2020 Estimates)



Source: CHS analysis of estimates provided by ESRI.

Exhibit 4.3 shows the estimated number of households with income below poverty as of 2019. A total of 6,404 households with income below poverty lived in the region.

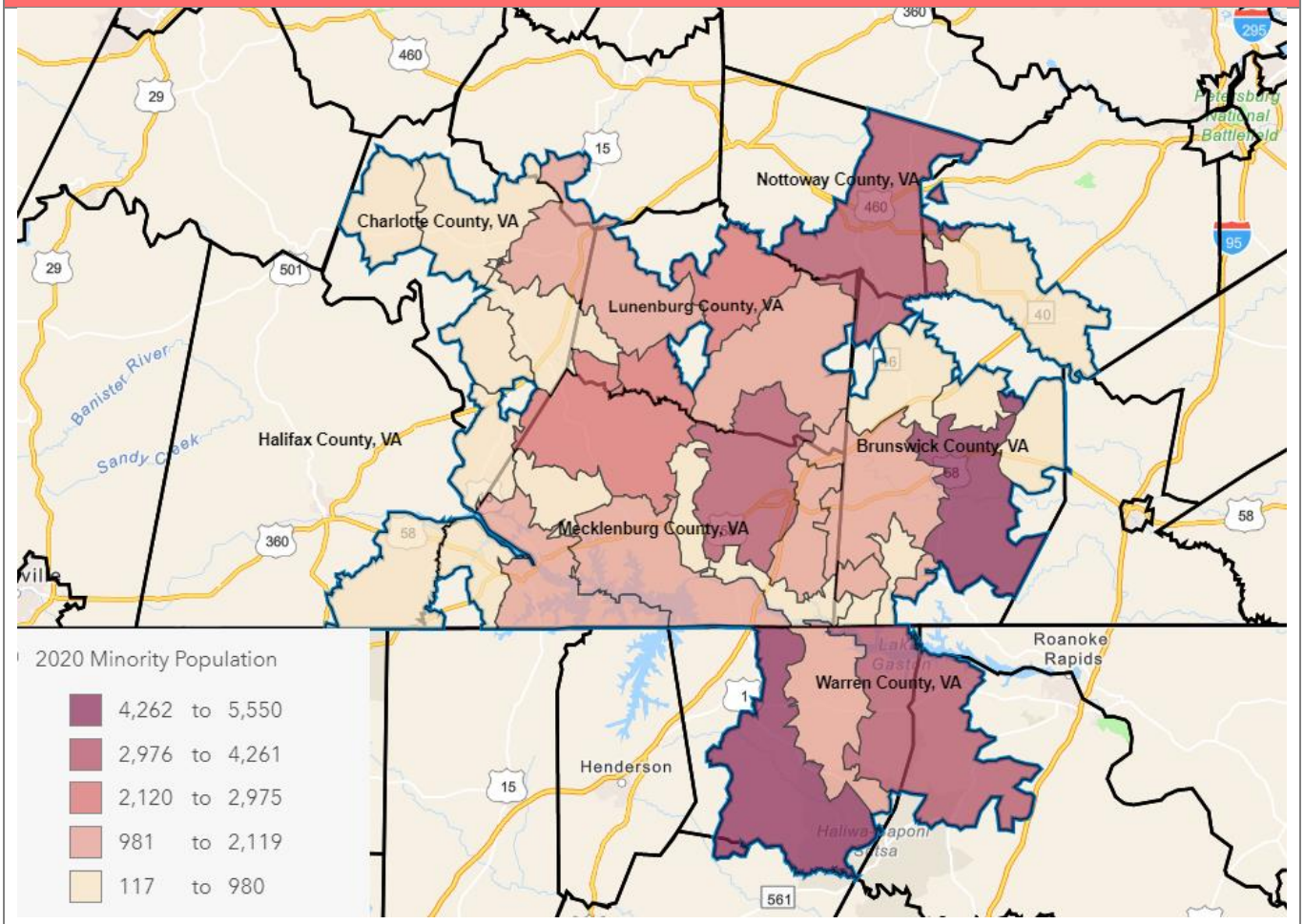
Exhibit 4.3
Number of Households with Income Below Poverty (2019 Estimates)



Source: CHS analysis of estimates provided by ESRI.

Exhibit 4.4 shows the estimated number of minority residents as of 2020. In this analysis, minority residents include people of races other than White, plus people of Hispanic ethnicity. A total of 47,079 minority residents live in the study region.

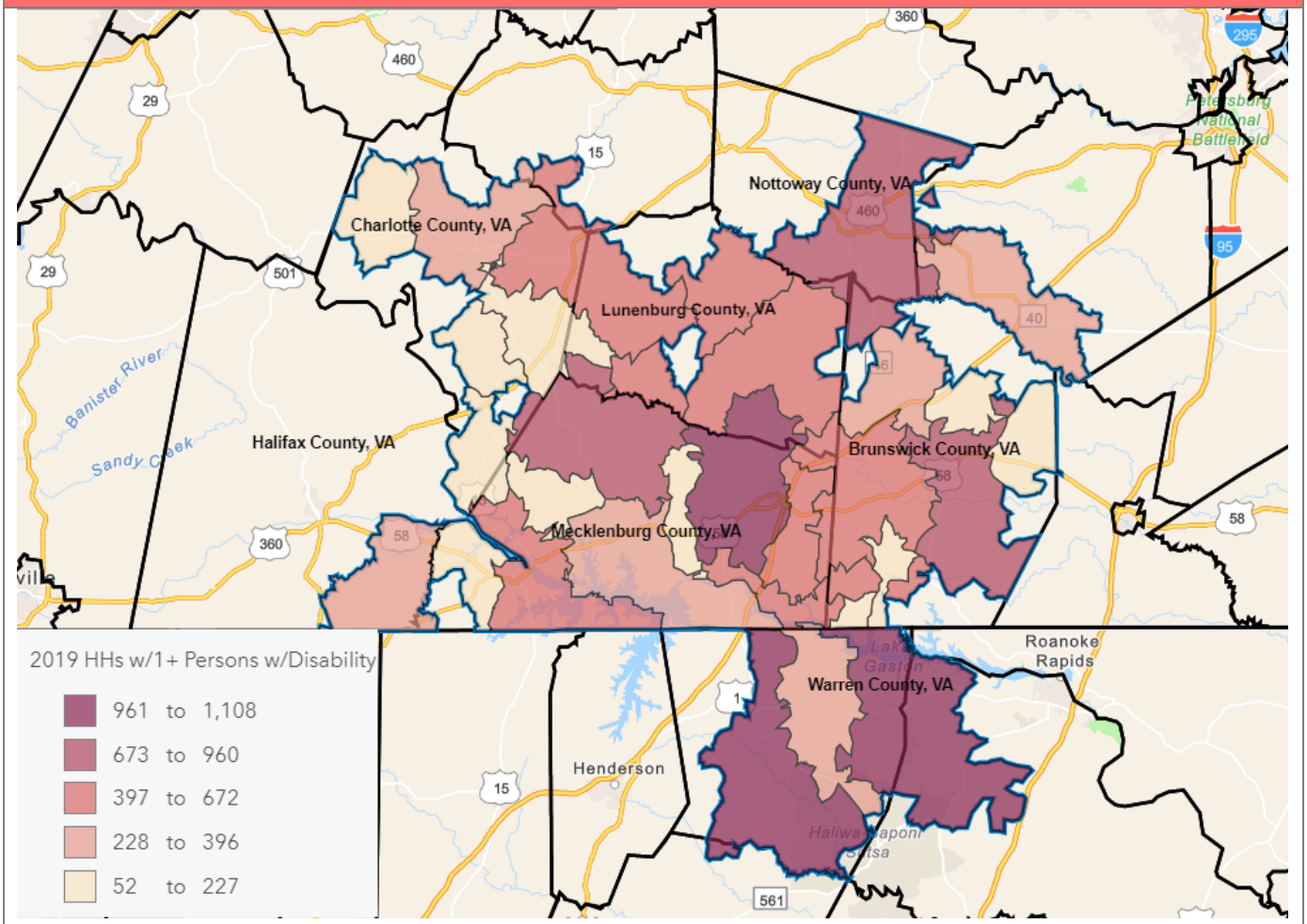
Exhibit 4.4
Number of Minority Residents (2020 Estimates)



Source: CHS analysis of estimates provided by ESRI.

Exhibit 4.5 shows the estimated number of households having one or more members with a disability as of 2019. A total of 12,718 households met this definition.

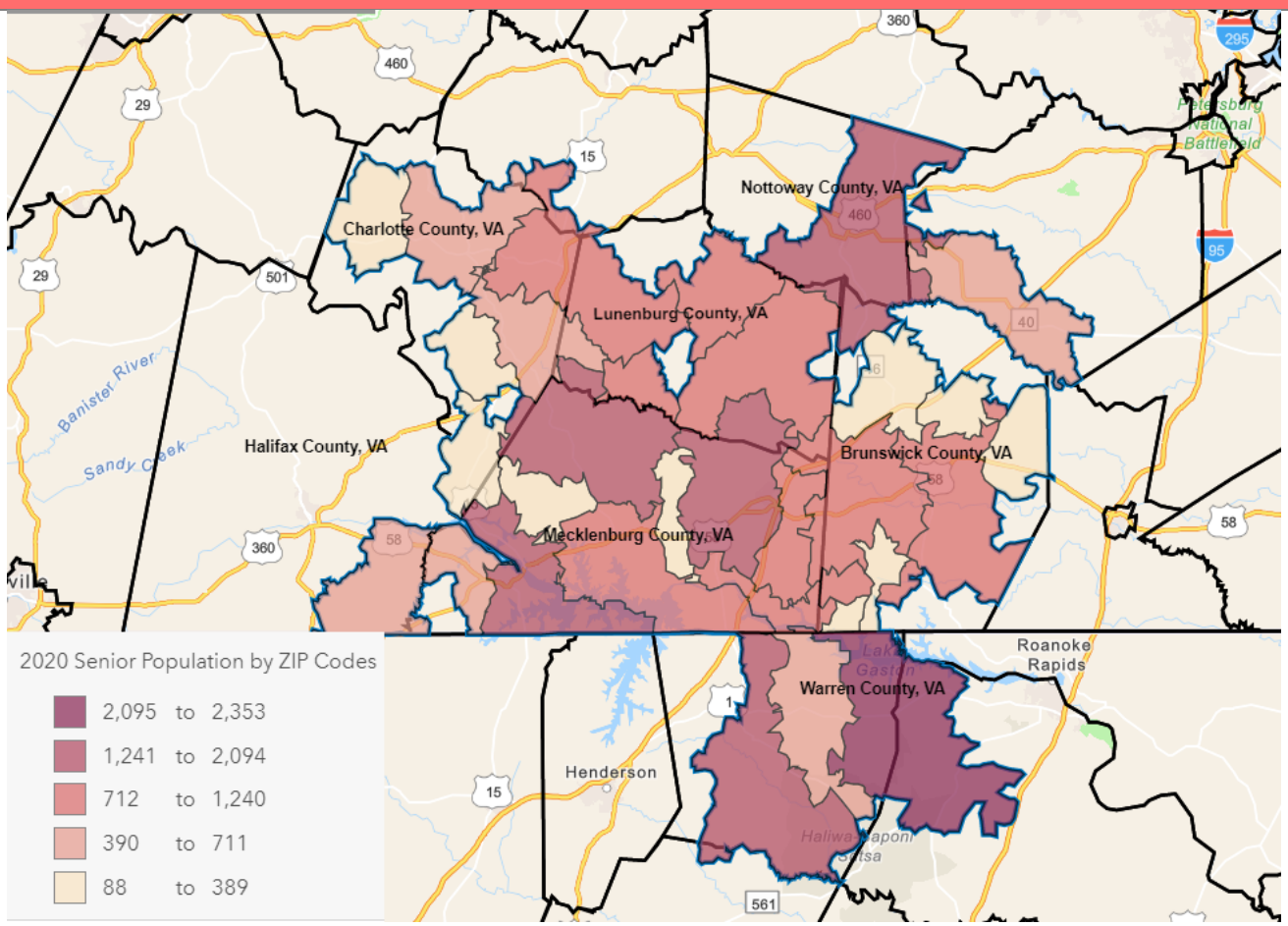
Exhibit 4.5
Households with 1+ Persons with Disability (2019 Estimates)



Source: CHS analysis of estimates provided by ESRI.

Exhibit 4.6 shows the estimated population age 65+ as of 2020. The estimates indicate there are 23,248 residents age 65+ in the study region.

Exhibit 4.6
Population Age 65+ (2020 Estimates)



Source: CHS analysis of estimates provided by ESRI.

Appendix A: Data Sources

Profile	Source
Section 1. Insights from Community Residents	Community Health Solutions analysis of Community Insight survey responses submitted by community residents conducted in January-March 2021.
Section 2. Insights from Community Professionals	Community Health Solutions analysis of Community Insight survey responses submitted by community professionals conducted in January-March 2021.
Section 3. Community Indicator Profiles	
A. Community Demographics	Community Health Solutions analysis of demographic estimates from ESRI. (2020 and 2025).
B. Social Determinants of Health	Community Health Solutions analysis of data from US Census Bureau and ESRI (2019 and 2020).
C. Health Risk Behaviors for Adults	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 (2018/2019) ☐ Local demographic estimates from ESRI (2020). 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. Local health district and statewide rates were used to render estimates at the zip code level. Therefore, 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.
D. Health Risk Behaviors for Youth	Estimates of chronic disease and risk behaviors for high school youth age 14-19 were produced by Community Health Solutions using: ☐ Data from the Virginia Youth Risk Behavioral Surveillance System from the Centers for Disease Control (2019). https://www.vdh.virginia.gov/content/uploads/sites/69/2020/06/2019VAH-Summary-Tables.pdf ☐ Local demographic estimates from ESRI (2020). 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. Local health district and statewide rates were used to render estimates at the zip code level. Therefore, 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.
E. Access to Health Care-Uninsured Population	Community Health Solutions analysis of demographic estimates from US Census Bureau (2019). Differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, direct comparisons of local estimates with state estimates are not recommended. These data may reflect conservative estimates of health coverage for 2019. Readers are encouraged to review current data on Medicaid Expansion enrollment that which updated on a regular basis. Click here view the Department of Medical Assistance Services Medicaid Expansion Access Dashboard.
Access to Health Care-Medically Underserved Areas/Populations	Community Health Solutions analysis of U.S. Health Resources and Services Administration data. For more information, visit: http://muafind.hrsa.gov/

Profile	Source
F. Leading Causes of Death	Data were obtained from the Virginia Department of Health (2019)
G. Maternal and Infant Health	Data were obtained from the Virginia Department of Health (2019)
H. Injury and Violence-Hospitalization	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2018 dataset and demographic estimates from ESRI (2018). 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. Injury and Violence definitions were developed using coding methodology from the Healthcare Cost and Utilization Project (HCUP) Clinical Classifications Software Refined (CCSR) for International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)-coded diagnoses https://www.hcup-us.ahrq.gov/toolssoftware/ccsr/DXCCSR-User-Guide.pdf 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.
I. Potentially Avoidable Hospitalizations	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2019 dataset and demographic estimates from ESRI (2020). 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. Potentially Avoidable 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.

Profile	Source
J. Mental Health and Substance Use: Hospitalizations	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2019 dataset and demographic estimates from ESRI (2020). 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. 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.
Section 4. Social Determinants of Health	• Community Health Solutions analysis of Community Insight survey responses submitted by community residents conducted in January-March 2021. • Maps based on Community Health Solutions analysis of demographic estimates from ESRI. (2020).