

**Rappahannock Area Community Health Assessment Update**

Rappahannock Area Health District, Virginia Department of Health

May 2023

# Introduction

In 2022, the Rappahannock Area Health District (RAHD) published a Community Health Assessment (CHA) in partnership with Mary Washington Healthcare (MWHC). This assessment utilized National Association of County and City Health Officials (NACCHO)’s Mobilizing for Action through Planning and Partnerships (MAPP) process to collect data through four assessments to get a robust understanding of health in the community.

After reviewing data presented in the CHA, the community selected three priority areas to focus on in the Community Health Improvement Plan (CHIP): Mental Health, Affordable Housing, and Access to Healthcare. Each of these priorities has a series of goals, objectives, and strategies that are being carried out through 2025, at which point the CHA and CHIP will be fully updated. Both the CHA and CHIP are available at [www.vdh.virginia.gov/rappahannock/fy23-fy25\_cha-chip/.](https://www.vdh.virginia.gov/rappahannock/fy23-fy25_cha-chip/)

Since the writing of the CHA, sources such as the CDC’s Behavioral Risk Factors Surveillance Survey (BRFSS) and the Census’s American Community Survey have released updated secondary data. Though this data still tends to lag one to two years behind the current calendar year, it is still worth reviewing to identify changing trends and threats.

This report will provide an annual update to secondary, quantitative data from the CHA. The report focuses on data related to demographics, CHIP priorities, and data that saw a changing trend in recent years, including but not limited to sexually transmitted infections (STI) and opioid use.

While this report focuses on RAHD’s five locality service area (Caroline, King George, Spotsylvania, and Stafford counties and the City of Fredericksburg), data on the other localities in MWHC’s service area are also included (Orange, Prince William, and Westmoreland counties).

# Demographic Information

1. **Total resident population**

Based on the demographic data for the year 2020 and 2021, it is estimated that the population of the RAHD region increased by 8,811 in total. Though the City of Fredericksburg saw a decrease in population, the counties are among the fastest growing localities in Virginia.[[1]](#footnote-1)

*Table 1: Total resident population in RAHD and MWHC Service areas*

|  |  |  |
| --- | --- | --- |
| **Area/Locality** | **Total resident population, 2020[[2]](#footnote-2)** | **Total resident population,** **2021[[3]](#footnote-3)** |
| Caroline County | 30,860 | 31,332 |
| City of Fredericksburg | 29,492 | 28,367 |
| King George County | 27,381 | 27,489 |
| Spotsylvania County | 138,449 | 143,676 |
| Stafford County | 156,748 | 160,877 |
| **Total population in PD16** | **382,930** | **391,741** |
| Orange County | 37,695 | 37,188 |
| Prince William County | 475,533 | 484,472 |
| Westmoreland County | 18,149 | 18,731 |
| **Overall total population** | **914,307** | **932,132** |

1. **Unemployment rate**[[4]](#footnote-4)

Unemployment rate represents the percentage of population ages 16 and older who are unemployed but seeking work. Data for the years 2020, 2021, and 2022 suggest that the rate of unemployment slightly decreased in the year 2021 and then rapidly increased in 2022.

*Figure 1: Unemployment rates in RAHD localities*

*Table 2: Unemployment rates in the US, Virginia, RAHD localities, and MWHC service areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 3.9% | 3.7% | 8.1% |
| **Virginia** | 3.0% | 2.8% | 6.2% |
| Caroline County | 3.5% | 3.2% | 6.7% |
| City of Fredericksburg | 3.5% | 3.4% | 7.2% |
| King George County | 2.9% | 2.6% | 4.5% |
| Spotsylvania County | 3.0% | 2.9% | 6.0% |
| Stafford County | 3.0% | 2.8% | 5.7% |
| Orange County | 3.0% | 3.0% | 5.6% |
| Prince William County | 2.7% | 2.5% | 6.5% |
| Westmoreland County | 3.6% | 3.5% | 5.9% |

1. **Median annual household income[[5]](#footnote-5)**

The median annual household income represents the income where half of the households in the county earn more, and half of households earn less. For the years 2020-22, all five RAHD localities reported an increase in median annual household income, with the City of Fredericksburg reporting the highest increase.

*Figure 2: Median annual household income in RAHD localities*

*Table 3: Median annual household income in the US, Virginia, RAHD localities, and MWHC service areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | $61,900 | $65,700 | $67,300 |
| **Virginia** | $72,600 | $76,500 | $79,200 |
| Caroline County | $67,300 | $64,600 | $67,700 |
| City of Fredericksburg | $58,400 | $62,100 | $72,400 |
| King George County | $86,600 | $85,700 | $90,800 |
| Spotsylvania County | $86,700 | $90,300 | $94,300 |
| Stafford County | $108,400 | $109,100 | $110,100 |
| Orange County | $63,700 | $71,700 | $73,200 |
| Prince William County | $106,200 | $106,200 | $111,100 |
| Westmoreland County | $51,400 | $54,900 | $59,300 |

# Mental Health

1. **Poor mental health days**[[6]](#footnote-6)

Poor mental health days represents the average number of mentally unhealthy days reported in past 30 days (age-adjusted). This can be due to stress, depression, and problems with emotions. All RAHD localities saw a steady increase in the number of reported poor mental health days from 2020 to 2021 with a slight leveling off from 2021 to 2022 in the counties and a decrease in poor mental health days in Fredericksburg City.

*Figure 3: Poor mental health days reported in RAHD localities*

*Table 4: Poor mental health days reported in the US, Virginia, RAHD localities, and MWHC service areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 4.0 | 4.1 | 4.5 |
| **Virginia** | 3.8 | 4.0 | 4.2 |
| Caroline County | 3.8 | 4.4 | 4.6 |
| City of Fredericksburg | 3.9 | 4.6 | 4.4 |
| King George County | 3.7 | 4.2 | 4.3 |
| Spotsylvania County | 3.6 | 4.2 | 4.3 |
| Stafford County | 3.2 | 3.9 | 3.9 |
| Orange County | 3.7 | 4.6 | 4.6 |
| Prince William County | 3.4 | 3.8 | 3.8 |
| Westmoreland County | 3.8 | 4.8 | 4.8 |

1. **Suicide rate**[[7]](#footnote-7)

Suicide rate indicates the number of deaths due to suicide per 100,000 population (age-adjusted). Caroline and King George reported an increase in the suicide rate from 2021 to 2022, Fredericksburg City saw a decrease in suicide rate, and Spotsylvania and Stafford remained at the same rates as 2021.

 *Figure 4: Suicides per 100,000 population in the RAHD localities*

*Table 5: Suicide rate per 100,000 population in the US, Virginia, RAHD localities, and MWHC service areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 14 | 14 | 14 |
| **Virginia** | 13 | 13 | 13 |
| Caroline County | 21 | 17 | 18 |
| City of Fredericksburg | 15 | 16 | 14 |
| King George County | 23 | 19 | 21 |
| Spotsylvania County | 12 | 13 | 13 |
| Stafford County | 13 | 13 | 13 |
| Orange County | 19 | 17 | 14 |
| Prince William County | 10 | 10 | 9 |
| Westmoreland County | 15 | 14 | 15 |

1. **Depressive Disorder rate[[8]](#footnote-8)**

This indicator represents the percentage of population who have ever been diagnosed with depressive disorder, which includes depression, major depression, dysthymia, or minor depression. Using the most recent available data, King George had the highest rate of depressive disorder rate among the RAHD localities.

*Figure 5: Depressive disorder rates in RAHD localities*

*Table 6: Depressive disorder rates in RAHD localities and MWHC service areas*

|  |  |
| --- | --- |
| **Area/Locality** | **2020** |
| Caroline County | 14.4% |
| Fredericksburg City | 16.5% |
| King George County  | 19.0% |
| Spotsylvania County | 16.3% |
| Stafford County | 14.1% |
| Orange County | 26.1% |
| Prince William County | 12.1% |
| Westmoreland County | 18.6% |

# Affordable Housing

1. **Housing occupancy status (vacant)[[9]](#footnote-9)**

This indicator shows the percentages of vacant housing units in RAHD localities. Caroline and King George counties reported higher number of vacant housing units in 2020.

*Figure 6: Percentage of vacant housing units in RAHD localities*

*Table 7: Percentage of vacant housing units in RAHD localities and MWHC services areas*

|  |  |
| --- | --- |
| **Area/Locality** | **2020** |
| Caroline County | 7.8% |
| City of Fredericksburg | 7.4% |
| King George County | 7.5% |
| Spotsylvania County | 6.3% |
| Stafford County | 3.6% |
| Orange County | 9.5% |
| Prince William County | 3.0% |
| Westmoreland County | 27.8% |

1. **Severe housing problems[[10]](#footnote-10)**

This indicator represents the percentages of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities. According to the data, Fredericksburg City reported a higher percentage of household with severe housing problems for several years among RAHD localities, followed by Spotsylvania County.

*Figure 7: Percentage of households with severe housing problems in RAHD localities*

*Table 8: Percentage of households with severe housing problems in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 18% | 18% | 17% |
| **Virginia** | 15% | 15% | 14% |
| Caroline County | 11% | 10% | 9% |
| City of Fredericksburg | 20% | 20% | 20% |
| King George County | 9% | 10% | 8% |
| Spotsylvania County | 13% | 13% | 13% |
| Stafford County | 11% | 10% | 10% |
| Orange County | 13% | 12% | 12% |
| Prince William County | 16% | 15% | 15% |
| Westmoreland County | 14% | 14% | 14% |

1. **Severe housing cost burden**[[11]](#footnote-11)

Severe housing cost burden indicates the percentage of households that spend 50% or more of their household income on housing. According to the data, the percentage of households with severe housing cost burden decreased from 2020 to 2022 in all RAHD localities except Stafford (where the percentage remains same) and King George (where the percentage is increasing).

*Figure 8: Percentage of households with severe housing cost burden in RAHD localities*

*Table 9: Percentage of households with severe housing cost burden in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 15% | 14% | 14% |
| **Virginia** | 13% | 13% | 12% |
| Caroline County | 8% | 9% | 7% |
| City of Fredericksburg | 18% | 18% | 17% |
| King George County | 8% | 8% | 9% |
| Spotsylvania County | 12% | 11% | 10% |
| Stafford County | 9% | 9% | 9% |
| Orange County | 10% | 11% | 11% |
| Prince William County | 13% | 12% | 12% |
| Westmoreland County | 13% | 14% | 14% |

1. **Median home price[[12]](#footnote-12)**

This indicator represents the median home price. This price was calculated by applying the House Price Index growth to the latest housing data from the American Community Survey (ACS). The cost of purchasing a home is highest in Stafford County and lowest in Caroline County.

*Figure 9: Median home price in RAHD localities*

*Table 10: Median home price in RAHD localities and MWHC services areas*

|  |  |
| --- | --- |
| **Area/Locality** | **2022** |
| Caroline County | $262,577 |
| City of Fredericksburg | $420,456 |
| King George County | $380,685 |
| Spotsylvania County | $384,392 |
| Stafford County | $481,039 |
| Orange County | $316,405 |
| Prince William County | $502,920 |
| Westmoreland County | $245,498 |

# Access to Care

1. **Uninsured adults**[[13]](#footnote-13)

This indicator represents the percentage of population under age 65 without health insurance. While King George’s rate of uninsured individuals remained steady at 7%, all other RAHD localities saw a decrease in the percent of the population that is uninsured.

*Figure 10: Percentage of uninsured adults in RAHD localities*

*Table 11: Percentage of uninsured adults in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 10% | 10% | 11% |
| **Virginia** | 10% | 10% | 9% |
| Caroline County | 11% | 11% | 10% |
| City of Fredericksburg | 11% | 11% | 10% |
| King George County | 7% | 7% | 7% |
| Spotsylvania County | 10% | 10% | 9% |
| Stafford County | 8% | 8% | 7% |
| Orange County | 12% | 11% | 10% |
| Prince William County | 12% | 12% | 11% |
| Westmoreland County | 13% | 13% | 11% |

1. **Primary care physicians**[[14]](#footnote-14)

This indicator indicates the ratio of population to primary care physicians. In other words, it represents the number of people theoretically dependent on a single healthcare provider, assuming residents seek care in their own locality. According to the data, the ratio is highest in Caroline and lowest in Fredericksburg among the RAHD localities, though many residents of all four counties in RAHD travel to the urban hub of Fredericksburg to seek care.

*Figure 11: Population to primary care physician ratio in RAHD localities*

*Table 12: Population to primary care physician ratio in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 1,330:1 | 1,320:1 | 1,310:1 |
| **Virginia** | 1,320:1 | 1,330:1 | 1,310:1 |
| Caroline County | 6,090:1 | 6,150:1 | 6,150:1 |
| City of Fredericksburg | 680:1 | 730:1 | 710:1 |
| King George County | 3,760:1 | 4,430:1 | 4,470:1 |
| Spotsylvania County | 1,600:1 | 1,660:1 | 1,720:1 |
| Stafford County | 3,300:1 | 3,260:1 | 3,400:1 |
| Orange County | 2,400:1 | 2,290:1 | 2,320:1 |
| Prince William County | 2,250:1 | 2,230:1 | 2,320:1 |
| Westmoreland County | 8,890:1 | 5,940:1 | 6,010:1 |

1. **Mental health providers**[[15]](#footnote-15)

This indicator represents the ratio of population to mental health providers. Similar to the ratio of primary care physicians, the ratio of mental health providers is highest in Caroline and lowest in Fredericksburg among RAHD localities.

*Figure 12: Population to mental health provider ratio in RAHD localities*

*Table 13: Population to mental health providers ratio in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 400:1 | 380:1 | 350:1 |
| **Virginia** | 570:1 | 530:1 | 480:1 |
| Caroline County | 3,080:1 | 3,070:1 | 2,570:1 |
| City of Fredericksburg | 160:1 | 140:1 | 140:1 |
| King George County | 2,420:1 | 2,240:1 | 1,830:1 |
| Spotsylvania County | 1,320:1 | 1,140:1 | 1,050:1 |
| Stafford County | 1,260:1 | 1,220:1 | 1,140:1 |
| Orange County | 1,830:1 | 1,850:1 | 1,570:1 |
| Prince William County | 860:1 | 800:1 | 710:1 |
| Westmoreland County | 8,920:1 | 9,010:1 | 6,050:1 |

1. **Dentists**[[16]](#footnote-16)

This indicator represents the ratio of population to dentists. Caroline continues to have the highest ratio of population to dentists, and the trend shows that Caroline has seen a greater increase in this ratio compared to other localities.

*Figure 13: Population to dentist ratio in RAHD localities*

*Table 14: Population to dentist ratio in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 1,450:1 | 1,400:1 | 1,400:1 |
| **Virginia** | 1,460:1 | 1,410:1 | 1,390:1 |
| Caroline County | 3,850:1 | 4,390:1 | 5,140:1 |
| City of Fredericksburg | 520:1 | 490:1 | 520:1 |
| King George County | 2,210:1 | 2,060:1 | 2,280:1 |
| Spotsylvania County | 2,530:1 | 2,430:1 | 2,520:1 |
| Stafford County | 2,940:1 | 2,940:1 | 3,010:1 |
| Orange County | 3,660:1 | 3,710:1 | 3,770:1 |
| Prince William County | 1,860:1 | 1,750:1 | 1,730:1 |
| Westmoreland County | 8,920:1 | 9,010:1 | 9,070:1 |

1. **Preventable hospital stays[[17]](#footnote-17)**

This indicator represents the rate of hospital stays for ambulatory-care sensitive conditions per 100,000 Medicare enrollees. In other words, it represents the number of hospital stays per 100,000 people enrolled in Medicare that might have been prevented by outpatient treatment. According to 2022 data, King George reported the highest rate of preventable hospital stays and the rate is increasing gradually compared to other RAHD localities.

*Figure 14: Rate of preventable hospital stays in RAHD localities*

*Table 15: Rate of preventable hospital stays in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 4,535 | 4,236 | 3,767 |
| **Virginia** | 4,461 | 4,269 | 3,896 |
| Caroline County | 5,781 | 5,181 | 5,693 |
| City of Fredericksburg | 5,514 | 6,769 | 6,451 |
| King George County | 6,073 | 6,327 | 6,710 |
| Spotsylvania County | 6,469 | 6,155 | 5,831 |
| Stafford County | 5,741 | 6,231 | 5,730 |
| Orange County | 4,303 | 4,760 | 4,508 |
| Prince William County | 5,131 | 4,709 | 4,205 |
| Westmoreland County | 5,353 | 4,888 | 4,796 |

1. **Mammography Screening[[18]](#footnote-18)**

This represents the percentage of female Medicare enrollees ages 65-74 that received an annual mammography screening. According to the data for 2020-22 years, the rate of mammography screening has been increasing for all RAHD localities, except Stafford County where the percentage remains at a relatively high but constant level.

*Figure 15: Percentage of mammography screenings in RAHD localities*

*Table 16: Percentage of mammography screenings in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 42% | 42% | 43% |
| **Virginia** | 44% | 43% | 44% |
| Caroline County | 38% | 40% | 41% |
| City of Fredericksburg | 34% | 35% | 40% |
| King George County | 36% | 34% | 37% |
| Spotsylvania County | 39% | 39% | 40% |
| Stafford County | 38% | 38% | 38% |
| Orange County | 44% | 44% | 46% |
| Prince William County | 36% | 36% | 36% |
| Westmoreland County | 42% | 42% | 44% |

# Other important indicators

1. **Premature deaths[[19]](#footnote-19)**

Premature death represents the years of potential life lost before age 75 per 100,000 population (age-adjusted). According to the data available below, all the localities in RAHD have seen increases in the premature death rate since 2020 except Caroline, though Caroline remains the highest on this measure.

*Figure 16: Rate of premature deaths per 100,000 population in RAHD localities*

*Table 17: Rate of premature deaths per 100,000 population in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 6,900 | 6,900 | 7,300 |
| **Virginia** | 6,400 | 6,400 | 6,700 |
| Caroline County | 8,600 | 7,900 | 8,500 |
| City of Fredericksburg | 7,800 | 7,900 | 8,300 |
| King George County | 7,400 | 7,700 | 7,900 |
| Spotsylvania County | 6,800 | 6,800 | 7,100 |
| Stafford County | 5,400 | 5,300 | 5,800 |
| Orange County | 8,500 | 8,300 | 8,400 |
| Prince William County | 4,700 | 4,600 | 5,000 |
| Westmoreland County | 8,500 | 8,700 | 8,600 |

1. **Sexually Transmitted Infections**
	1. **Chlamydia rate[[20]](#footnote-20)**

This indicator represents the number of newly diagnosed chlamydia cases per 100,000 population. According to the data from 2020 to 2022, all the localities in RAHD have seen an increase in the rate of chlamydia except Fredericksburg, where the rate decreased.

*Figure 17: Chlamydia rate per 100,000 population in RAHD localities*

*Table 18: Chlamydia rate per 100,000 population in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2020** | **2021** | **2022** |
| **United States** | 524.6 | 539.9 | 551.0 |
| **Virginia** | 500.3 | 507.3 | 564.3 |
| Caroline County | 453.0 | 446.5 | 488.2 |
| City of Fredericksburg | 863.9 | 768.7 | 699.1 |
| King George County | 315.1 | 402.5 | 413.6 |
| Spotsylvania County | 370.6 | 394.6 | 432.4 |
| Stafford County | 367.5 | 424.8 | 444.1 |
| Orange County | 271.7 | 249.5 | 305.0 |
| Prince William County | 434.1 | 485.9 | 545.6 |
| Westmoreland County | 410.6 | 388.1 | 505.1 |

* 1. **New Early Syphilis Diagnosis in RAHD Localities[[21]](#footnote-21)**

This indicator represents the rate of new early syphilis diagnosis per 100,000 residents. As per the data, the City of Fredericksburg and Spotsylvania County reported a sharp increase in the number of new early syphilis diagnosis in 2021. The rate for King George County is suppressed due to low case numbers.

*Figure 18: New early syphilis diagnosis rate per 100,000 population in RAHD localities*

*Table 19: New early syphilis diagnosis rate rate per 100,000 population in RAHD localities and MWHC services areas*

|  |  |  |  |
| --- | --- | --- | --- |
| **Area/Locality** | **2019** | **2020** | **2021** |
| **Virginia** | 15.1 | 15.1 | 16.4 |
| Caroline County | 13.0 | 19.4 | 9.7 |
| City of Fredericksburg | 13.8 | 6.8 | 27.1 |
| King George County | NA | NA | NA |
| Spotsylvania County | 8.8 | 3.6 | 11.6 |
| Stafford County | 13.7 | 12.1 | 10.8 |
| Orange County | 8.1 | 15.9 | 2.7 |
| Prince William County | 11.1 | 14.9 | 10.9 |
| Westmoreland County | 5.6 | 11.0 | 16.5 |

* 1. **New Early Syphilis Diagnosis in Virginia by race/ethnicity[[22]](#footnote-22)**

This indicator represents the rate of new early syphilis diagnosis in the State of Virginia by gender. As per the data, the rate is significantly high among Black (non-Hispanic) and Hispanic when compared to White (non-Hispanic).

*Figure 19: New early syphilis diagnosis in Virginia by race/ethnicity*

1. **Opioid or Opioid Overdose**
	1. **Death rate for any opioid related drug overdose, 2021[[23]](#footnote-23)**

This indicator represents death rate for any opioid overdose per 100,000 population. All localities in RAHD reported higher rates of deaths due to any opioid related overdose compared to the State of Virginia. Caroline and Spotsylvania’s rates of opioid related overdose are more than double the state average.

*Figure 20: Death rate for any opioid related drug overdose in RAHD localities*

* 1. **Time trend for all opioid related deaths in RAHD localities[[24]](#footnote-24)**

The following graphs show the rate of all opioid related deaths per 100,000 population in RAHD localities from 2017 to 2021. These graphs indicate that the rate of opioid related deaths is increasing in all RAHD localities, except King George County, where the rate is decreasing.

|  |  |
| --- | --- |
| **Caroline County** | **Fredericksburg City** |
|  |  |
| **King George County** | **Spotsylvania County** |
|  |  |
| **Stafford County** |
|  |

* 1. **Maternal Opioid Use Disorder (OUD), rate per 1,000 delivery hospitalizations (2020)[[25]](#footnote-25)**

This indicator reports the rate of hospital inpatient stays due to maternal opioid use disorder, per 1,000 delivery hospitalizations. Maternal opioid use disorder refers to maternal drug dependency or non-dependency use of opiates or opioids such as heroin, methadone, and prescription pain medications diagnosed during a delivery hospitalization. Maternal opioid use disorder can cause many negative health outcomes for mothers and their babies, both during pregnancy and after delivery. Infants can be born with breathing and feeding problems, and mothers are at risk of opioid-related overdoses. Caroline, Fredericksburg, and Spotsylvania have higher rates than the Virginia average, Stafford is slightly below this average, and King George’s data was suppressed due to low case counts.

*Figure 21: Rate of Maternal Opioid Use Disorder per 1,000 delivery hospitalizations*

* 1. **Neonatal Abstinence Syndrome (NAS), rate per 1,000 Birth hospitalizations (2020)[[26]](#footnote-26)**

This indicator reports the rate of hospital inpatient stays due to neonatal abstinence syndrome (NAS), per 1,000 birth hospitalizations. Neonatal Abstinence Syndrome (NAS) is also known as neonatal drug dependency or withdrawal symptoms, and predominantly occurs from maternal use of opiates, such as heroin, or opioids such as methadone, fentanyl, and prescription pain medications during pregnancy. Babies with NAS are at increased risk of low birthweight, jaundice, seizures, and sudden infant death syndrome (SIDS), in addition to withdrawal signs. NAS represents a significant public health concern given the association of opioid exposure and adverse maternal and neonatal outcomes, including preterm labor, stillbirth, neonatal abstinence syndrome, and maternal mortality. Fredericksburg, Caroline, and Stafford saw higher rates of NAS than the Virginia average in

*Figure 22: Rate of Neonatal Abstinence Syndrome per 1,000 birth hospitalizations*

# Discussion

## Context and COVID-19

This annual update to the CHA is of particular importance since it includes data updates for 2020, 2021, and 2022, capturing the years that marked the height of the COVID-19 pandemic. The data in this report provide a snapshot and additional understanding of the pandemic’s impacts will continue to years to come, but this report allows the community to better understand the health, societal, and demographic changes that were not as readily apparent in the 2022 CHA.

## Mental Health

Mental health was a clear community priority during the 2022 CHA/CHIP process. Updated data shows the number of poor mental health days climbed from 2020 to 2021 before leveling off in 2022, though the numbers have not returned to pre-pandemic levels.

Other indicators highlight that mental health remains a particular problem in the more rural areas. While overall suicide rates remained at about the same level in recent years, rates in the more rural counties of Caroline and King George had held at levels above the state and national averages, and King George has the highest rates of depression in the region. The number of mental health providers in Caroline and King George remain low relative to the overall population, and Stafford and Spotsylvania also have low ratios of mental health providers compared to the state and national average.

## Affordable Housing

Data indicates that Fredericksburg continues to have higher rates of severe housing problems (overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities) than the rest of RAHD localities and that a greater percent of Fredericksburg households experience severe housing cost burden than the counties. Spotsylvania also falls above Caroline, King George, and Stafford on these measures.

Though the most recent data is from 2020, Stafford County reports the highest median housing costs and the lowest housing vacancy rates in the area.

## Access to Healthcare

The number of uninsured individuals decreased across RAHD from 2020 to 2022, a likely effect of Virginia Medicaid expansion going into effect in 2019. As Virginia begins the Medicaid Unwinding process, requiring recipients to recertify their Medicaid eligibility for the first time since 2020, these rates may change in the 2023 data, so this will be something to continue to monitor.

Ratios of population to primary care physicians saw a slight increase across all localities, and ratios of population to dentists remained high but steady in all counties except Caroline, which saw the ratio of population increase.

## Other Notable Trends

Across RAHD, there was an increase in premature death from 2020 to 2022. While some of this may be a result of COVID-19 related deaths, it may also be an indicator of reduced life expectancy. Additional research is required to understand which groups may be most impacted and which causes of death are the biggest contributors.

Syphilis cases increased sharply in the City of Fredericksburg from 2021 to 2022. Syphilis, including congenital syphilis, has been on the rise statewide. Given the racial inequities in syphilis cases in the state level data, additional research may be warranted in this area as well.

Finally, RAHD performs worse than the state average on all opioid measures identified here. Deaths due to opioid overdose are higher than Virginia as a whole across all localities, and with the exception of King George, all localities have seen an increase in this measure in recent years. Though RAHD is only slightly higher than the Virginia average when it comes to maternal opioid use disorder, rates are much higher in Caroline and Fredericksburg, and rates of neonatal abstinence syndrome are higher than the state average in Caroline, Fredericksburg, and Stafford.

With COVID-19 entering an endemic phase, these are some of the areas that may require additional focus moving forward.

# Conclusion

This report provides a snapshot of data trends for some of the health indicators prioritized by the community during the initial CHA/CHIP process in 2022 and includes some new indicators which can help RAHD and the entire local public health system identify and prioritize public health interventions.

Since the initial CHA in 2022, RAHD, in collaboration with multiple community partners, developed goals, objectives, and strategies to work on the three prioritized areas through the CHIP process. An update on this CHIP progress will be made available through a separate report. An additional CHA update is expected in 2024, and the full CHA update will be completed again in 2025.

1. Weldon Cooper Center for Public Service Demographics Research Group, Population Estimates for Virginia and its Counties and Cities, 2023. [↑](#footnote-ref-1)
2. Census Population Estimates, 2020. [↑](#footnote-ref-2)
3. Census Population Estimates, 2021. [↑](#footnote-ref-3)
4. Bureau of Labor Statistics, 2021. [↑](#footnote-ref-4)
5. Small Area Income and Poverty Estimates, 2021. [↑](#footnote-ref-5)
6. BRFSS, 2020. [↑](#footnote-ref-6)
7. National Centers for Health Statistics- Mortality Files, 2016-2020. [↑](#footnote-ref-7)
8. BRFSS Small Area Estimate, 2020. [↑](#footnote-ref-8)
9. US Census Bureau, 2020. [↑](#footnote-ref-9)
10. Comprehensive Housing Affordability Strategy (CHAS) data, 2015-2019. [↑](#footnote-ref-10)
11. American Community Survey, 5-year estimates, 2017-2021. [↑](#footnote-ref-11)
12. National Association of Realtors, 2023. ([link](https://www.nar.realtor/research-and-statistics/housing-statistics/county-median-home-prices-and-monthly-mortgage-payment)) [↑](#footnote-ref-12)
13. Small Area Health Insurance Estimates, 2020. [↑](#footnote-ref-13)
14. Area Health Resource File/American Medical Association, 2020. [↑](#footnote-ref-14)
15. CMS, National Provider Identification, 2022. [↑](#footnote-ref-15)
16. Area Health Resource File/National Provider Identifier Downloadable File, 2021. [↑](#footnote-ref-16)
17. Mapping Medicare Disparities Tool, 2020. [↑](#footnote-ref-17)
18. Mapping Medicare Disparities Tool, 2020. [↑](#footnote-ref-18)
19. National Center for Health Statistics- Mortality Files, 2018-2020. [↑](#footnote-ref-19)
20. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2020. [↑](#footnote-ref-20)
21. Virginia STD Surveillance Report, 2021. [↑](#footnote-ref-21)
22. Virginia STD Surveillance Report, 2021. (link) [↑](#footnote-ref-22)
23. Virginia Department of Health, Opioid Data. ([link](https://www.vdh.virginia.gov/opioid-data/overdose-deaths/#trend)) [↑](#footnote-ref-23)
24. Virginia Department of Health, Opioid Data. ([link](https://www.vdh.virginia.gov/opioid-data/overdose-deaths/#trend)) [↑](#footnote-ref-24)
25. VDH, Office of Information Management, Division of Health Statistics, 2020. ([link](https://phvi.wpengine.com/data-tool/?REPORT=%7B%22name%22%3A%22Virginia%20Community%20Health%20Assessment%22%2C%22style%22%3A%22VDH%22%2C%22contentId%22%3A%22%23cdt-report-content%22%2C%22output%22%3A%7B%22countylist%22%3Atrue%2C%22statelist%22%3Atrue%2C%22ziplist%22%3Afalse%2C%22tractlist%22%3Afalse%2C%22map%22%3Atrue%2C%22breakout%22%3Atrue%7D%2C%22indicator%22%3A%5B45%5D%2C%22location%22%3A%7B%22key%22%3A%22county%22%2C%22type%22%3A%22county%22%2C%22show_county%22%3Atrue%2C%22show_state%22%3Atrue%2C%22show_zip%22%3Afalse%2C%22show_tract%22%3Afalse%2C%22id%22%3A%5B%2251033%22%5D%2C%22name%22%3A%5B%22Caroline%20County%2C%20VA%22%5D%7D%7D)) [↑](#footnote-ref-25)
26. VDH, Office of Information Management, Division of Health Statistics, 2020. ([link](https://phvi.wpengine.com/data-tool/?REPORT=%7B%22name%22%3A%22Virginia%20Community%20Health%20Assessment%22%2C%22style%22%3A%22VDH%22%2C%22contentId%22%3A%22%23cdt-report-content%22%2C%22output%22%3A%7B%22countylist%22%3Atrue%2C%22statelist%22%3Atrue%2C%22ziplist%22%3Afalse%2C%22tractlist%22%3Afalse%2C%22map%22%3Atrue%2C%22breakout%22%3Atrue%7D%2C%22indicator%22%3A%5B43%5D%2C%22location%22%3A%7B%22key%22%3A%22county%22%2C%22type%22%3A%22county%22%2C%22show_county%22%3Atrue%2C%22show_state%22%3Atrue%2C%22show_zip%22%3Afalse%2C%22show_tract%22%3Afalse%2C%22id%22%3A%5B%2251033%22%2C%2251630%22%2C%2251099%22%2C%2251177%22%2C%2251179%22%5D%2C%22name%22%3A%5B%22Caroline%20County%2C%20VA%22%2C%22Fredericksburg%20city%2C%20VA%22%2C%22King%20George%20County%2C%20VA%22%2C%22Spotsylvania%20County%2C%20VA%22%2C%22Stafford%20County%2C%20VA%22%5D%7D%7D)) [↑](#footnote-ref-26)