

## Arthritis Burden in Virginia

### Executive Summary

#### Background

Arthritis is a collection of over 100 different types of joint and connective tissue-related diseases. It is one of the most common chronic diseases in the nation, affecting all ages.<sup>1,2</sup> In 2021, about one-fourth (25.2%) of U.S. adults reported being diagnosed with arthritis, compared to 27.1% of Virginia adults.<sup>3,6</sup> Arthritis often causes severe joint pain and stiffness and can lead to permanent joint damage, which is why it is one of the leading causes of work disability in the U.S.<sup>1,2</sup>

Virginia is one of 12 states funded through the Centers for Disease Control and Prevention (CDC) to implement the [State Public Health Approaches to Addressing Arthritis](#) Cooperative Agreement for five years (2023-2028). The goal of this funding is to improve arthritis management and the quality of life of people with arthritis across Virginia.<sup>5</sup>

#### Data & Methods

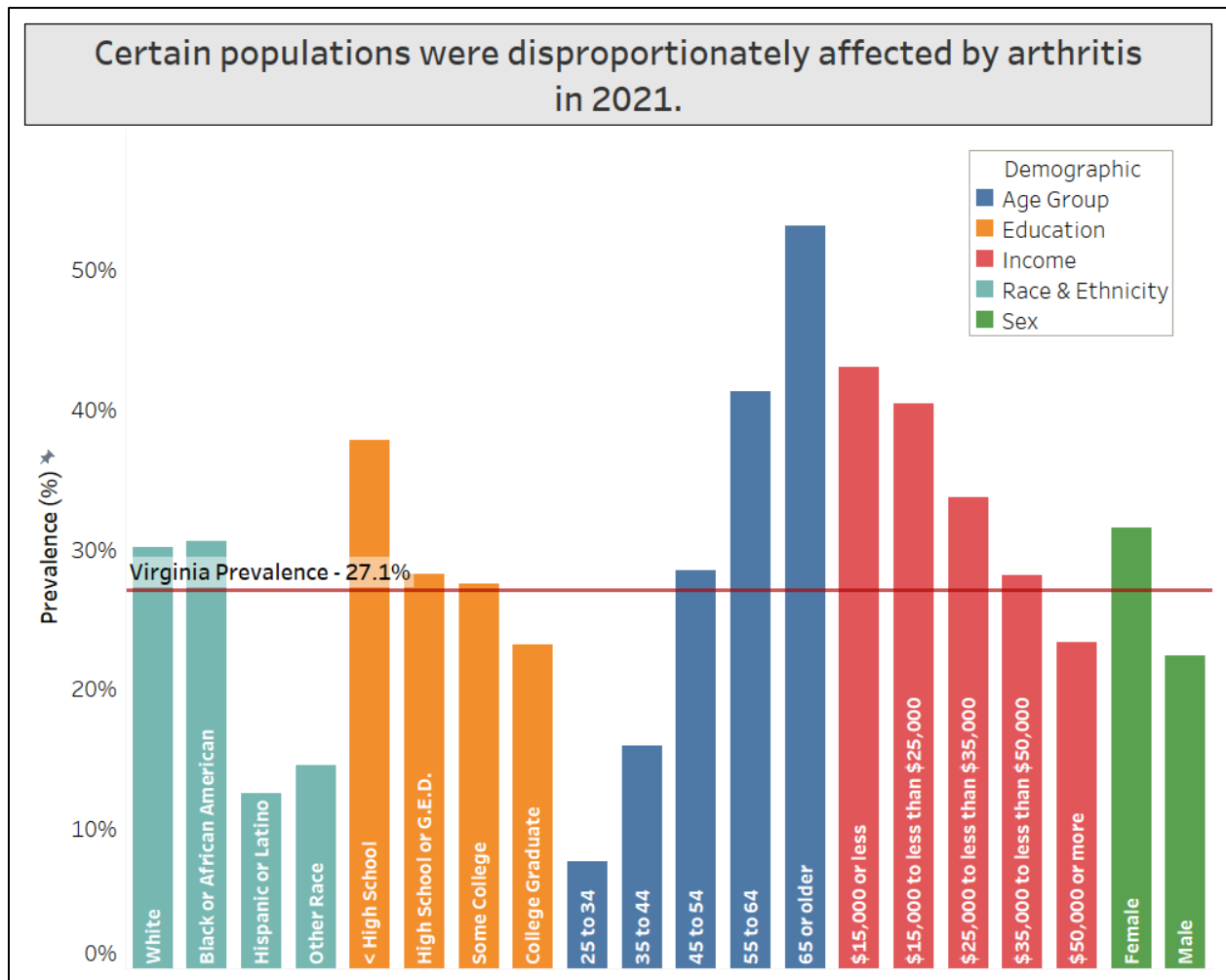
This report uses data from two sources to describe the burden of arthritis in Virginia: the Behavioral Risk Factor Surveillance System (BRFSS) survey and Virginia hospitalization data. The BRFSS survey is a national telephone survey that collects information from adults (18 years and older) about health-related risk behaviors, chronic health conditions, and the use of preventive services. Responses from arthritis-related questions from the 2021 BRFSS survey were utilized in this report. The arthritis questions in the BRFSS survey ask respondents if they have been diagnosed with any type of arthritis and collect information about pain, activity limitations, arthritis management activities, as well as other health-related information.<sup>3</sup> The hospitalization data included patients discharged from Virginia-licensed hospitals between 2017 and 2021 with an arthritis-related diagnosis. Diagnoses are based on International Classification of Diseases, Tenth Revision (ICD-10) codes defined by the Chronic Conditions Data Warehouse of the Centers for Medicare & Medicaid Services.<sup>4</sup>

#### Findings

##### Prevalence

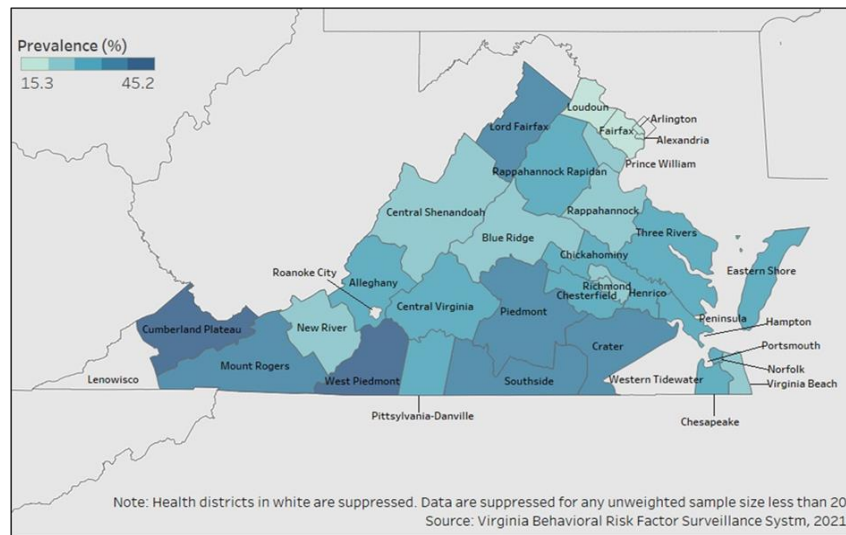
Arthritis prevalence was higher among certain demographic and socioeconomic groups in Virginia, including non-Hispanic Black Virginians; Virginians with less education; older Virginians; lower income groups; and female Virginians.<sup>3</sup> An overview of arthritis prevalence by demographic and socioeconomic factors reported through the 2021 Virginia BRFSS survey can be seen in figure 1 below.

**Figure 1.**



In 2021, the Virginia Department of Health (VDH) local health districts with the highest arthritis prevalence were West Piedmont (45.2%), Cumberland Plateau (39.8%) and Crater (37.2%), all located in the southern portion of the state. The arthritis prevalence in West Piedmont (45.2%) was more than one and a half times the statewide arthritis prevalence of 27.1% in 2021.<sup>3</sup> The varying prevalence across the health districts can be seen in figure 2 below.

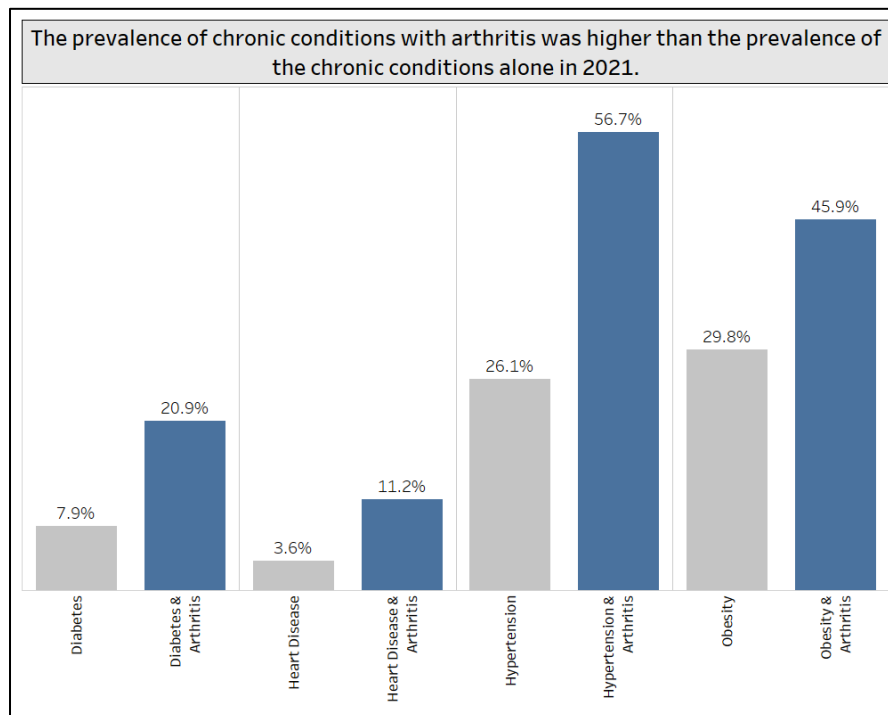
**Figure 2.**



### Comorbidities

Comorbidity refers to the presence of two or more diseases in a patient at the same time. Arthritis commonly occurs alongside other chronic diseases, which can make it more difficult for people to manage their health. Figure 3 below shows the prevalence of individuals who reported their arthritis status with other associated chronic diseases, including hypertension, heart disease, diabetes, and obesity from the 2021 BRFSS survey.<sup>3</sup>

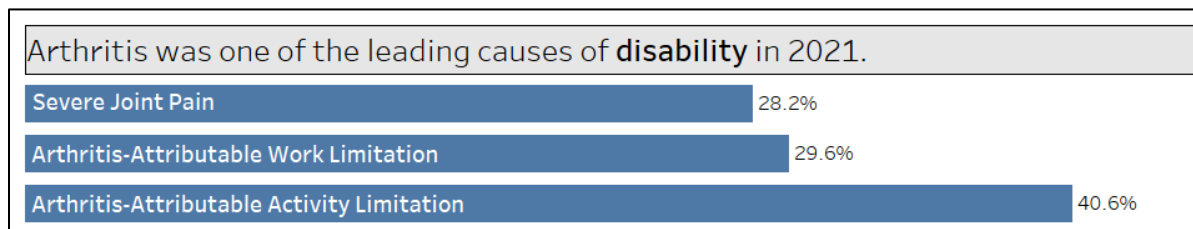
**Figure 3.**



### Arthritis & Limitations

Arthritis can cause severe joint pain and lead to permanent joint damage, which is why it is one of the leading causes of disability in the U.S.<sup>1,2</sup> Figure 4 below shows the prevalence of arthritis related joint pain as well as arthritis attributable limitations from responses to the 2021 BRFSS survey.<sup>3</sup>

**Figure 4.**

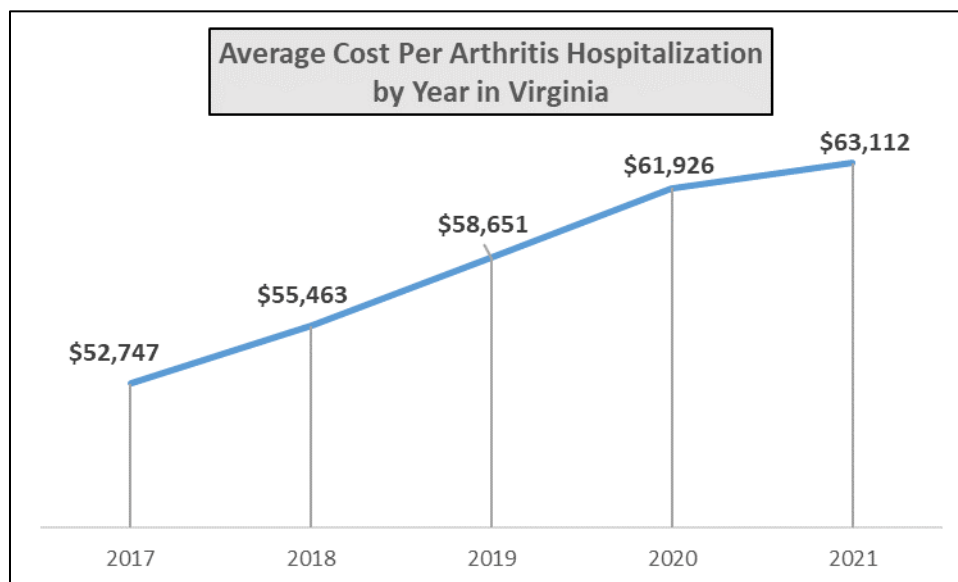


### Arthritis Hospitalizations

A similar pattern is seen among arthritis-related hospitalizations in Virginia by patient demographics when compared to arthritis prevalence. The highest rate of arthritis-related hospitalizations (age-adjusted rate per 100,000 population) occurs among older Virginians; females; and non-Hispanic Black Virginians.<sup>4</sup>

By geography, the central region had the highest and the northern region had the lowest age-adjusted rate of arthritis hospitalizations in the state in 2021. In the same year, there was a wide variation in age-adjusted arthritis hospitalization rates across Virginia’s local health districts; however, the three districts with the highest rates were Crater, Lord Fairfax, and Portsmouth. Lastly, as can be seen in figure 5 below, the average cost per arthritis-related hospitalization increased steadily from \$52,747 in 2017 to \$63,112 in 2021.<sup>4</sup>

**Figure 5.**



## Summary

Overall, the burden of arthritis in Virginia of 27.1% is slightly higher than the national prevalence of 25.2%.<sup>3,6</sup> Certain Virginia populations are disproportionately affected including lower income and educational attainment groups, females, older individuals, and non-Hispanic Black Virginians. The southern portion of the state also experiences a higher prevalence than the rest of Virginia. Furthermore, the prevalence of arthritis with diabetes, hypertension, heart disease, and obesity was higher than the prevalence of each of these conditions on their own.<sup>3</sup> Arthritis is also one of the leading causes of disability.<sup>2</sup> The Virginia Department of Health continues to address the burden of arthritis and improve health outcomes through federally funded grants and programs that aim to increase education, diagnosis, and management of arthritis.<sup>5</sup>

## References

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