



2020 State of the Commonwealth Report

December 2020

Dear Reader:

This is Old Dominion University's sixth annual State of the Commonwealth Report. While it represents the work of many people connected in various ways to the university, the report does not constitute an official viewpoint of Old Dominion, its president, John R. Broderick, the Board of Visitors, the Strome College of Business or the generous donors who support the activities of the Dragas Center for Economic Analysis and Policy.

Although our devotion to this work remains steadfast, our enthusiasm, admittedly, has been dampened by the COVID-19 pandemic and the toll it has taken on the Commonwealth and nation. Our work seeks to inform about the road ahead and the nature of recovery over the coming years.

To adapt, improve and overcome, we must understand where we are and where we want to go. Our goal is to contribute to this conversation without glossing over the challenges we face. We want to encourage the difficult conversations to help Virginia improve outcomes for all its residents in the coming years.

The 2020 State of the Commonwealth Report is divided into five parts:

COVID-19 and the Commonwealth

In January 2020, Virginia was focused on the continuing economic expansion and shortages of skilled labor in many areas of the Commonwealth. Now, as 2020 draws to a close, we face the prospects of a hard winter and a slow recovery from the COVID-19 pandemic. We examine the impact of COVID-19 on Virginia and discuss how the pandemic has disproportionately impacted our Black or African American and Hispanic or Latino residents.

The Way We Were: 2010-2019

In the wake of the COVID-19 pandemic and associated social distancing measures, the challenges of the last decade seem almost trivial in comparison. Yet, these challenges hold valuable lessons for our current economic

environment and how to build a better economy in this decade. We take a fresh look at the previous decennial – our economic successes and areas where we could improve – and provide insight into how these experiences can help us recover in the coming years.

Feeding Virginia

In 2018, 1 in 10 adult Virginians did not know with certainty how they would obtain their next meal. This food insecurity affects an even greater proportion of children in the Commonwealth. It not only lowers learning outcomes, but also reduces workplace productivity. Now, amid the COVID-19 pandemic, food insecurity in Virginia has increased. We explore how public programs and regional food banks are working to address this problem.

Youth Mental Health in Virginia

Over the last decade, an increasing number of young people reported being anxious or depressed. And now, the COVID-19 pandemic has necessitated closing schools, curtailing extracurricular activities and limiting social contacts for many of Virginia's youth. In this chapter, we explore the state of youth mental health in the Commonwealth and gauge how our younger residents are faring during the pandemic. We find that there is an increasing need for youth mental health services and discuss what can be done to help those who could benefit the most.

Virginia's Opioid Epidemic Continues and COVID-19 May Be Making It Worse

In 2017, we explored the rising toll of the opioid epidemic in Virginia and the United States. While COVID-19 has garnered much of the attention in 2020, the opioid epidemic continues in the Commonwealth. We revisit the evidence and consider whether the pandemic and social distancing measures have affected opioid overdoses in Virginia.

The Strome College of Business and Old Dominion University continue to provide support for the State of the Commonwealth Report. However, it would not appear without the vital backing of the private donors whose names appear below. They believe in Virginia and the power of rational discussion to improve our circumstances but are not responsible for the views expressed in the report.

Richard F. Barry III

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Helen Dragas

First Advantage Federal
Credit Union

David and Susan Goode

Hampton Roads Chamber

Thomas Lyons

Patricia and J. Douglas Perry

Dr. Jitendra Swarup

The following individuals were instrumental in the writing, editing, design and dissemination of the report:

Vinod Agarwal

Barbara Blake

Steve Daniel

Ashley DeSilva

Addie Gregory

Elizabeth Janik

Nikki Johnson

James V. Koch

Tim Komarek

Feng Lian

Sharon Lomax

Janet Molinaro

Brendan O'Hallarn

Bailey Park

Terry Parker

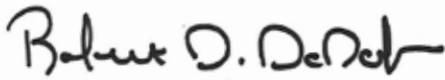
Jay Walker

Hannah White

All six State of the Commonwealth Reports are available at www.ceapodu.com.

If you have comments or suggestions, please email us at rmcnab@odu.edu.

Sincerely,



Robert M. McNab

Director, Dragas Center for Economic Analysis and Policy

Professor of Economics, Department of Economics

Strome College of Business

Old Dominion University

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COVID-19 AND THE COMMONWEALTH

*There is only one kind of shock worse than
the totally unexpected: the expected for which
one has refused to prepare.*

– Mary Renault, “The Charioteer”



Entering 2020, the conversation in Virginia centered on a sixth consecutive year of economic growth, an unemployment rate below 3% and rising incomes. While projections varied about the pace of economic growth, there was consensus that the Commonwealth would enjoy a substantial budget surplus, raising the prospect of contentious debates about how and where the state should spend this money. While there was news about a troubling respiratory virus emerging in China, our nation had responded to similar threats before without significant disruption to the economy or society.

Looking back on these times is an exercise fraught with nostalgia. We now live in a world where our temperatures are checked, questions about our health are asked and exposure to the coronavirus means, at a minimum, a two-week quarantine. Virginia has fared better than many other states by following scientific advice on the public health response to COVID-19. Arguments, however, rage on social media and in the public square about the benefits of universal masking and the efficacy of vaccines. As a backdrop to these debates, unemployment is higher, food security is lower and Virginians are left to ponder the question of when life will return to some semblance of normality. In the midst of this pandemic, the definition of normal has changed to include mask wearing, testing and contact tracing. Even with the positive news about the efficacy of COVID-19 vaccines, a complete economic recovery will likely take years, not months, if recent economic experience is any guide.

The COVID-19 pandemic has dramatically affected how Virginians live and work. It has also thrown the fractures in our economy in sharp relief. The rapid increases in unemployment were followed by modest gains in employment as a measure of recovery took place in the Commonwealth. Yet, a disproportionate number of Black or African American Virginians have lost their jobs and face increasingly desperate financial straits. Income and wealth inequities have left Black and Hispanic households with fewer resources to cope with the ongoing economic shock. Data from the Centers for Disease Control and Prevention (CDC) show that, nationally and in the Commonwealth, Blacks and Hispanics comprise a greater proportion of COVID-19 deaths than their share of the overall population. Household survey data from the U.S. Census Bureau highlight the impact of economic and social turmoil. Black and Hispanic households are more likely to experience anxiety or depression than white or Asian households.

While there continue to be signs of recovery, we cannot gloss over the simple fact that we are witnessing an economic, social and public health shock the likes of which has not been seen in the United States since the Great Depression. The Virginia economy will contract in 2020 and the pace of growth in 2021 depends, in part, on how quickly the country can inoculate wide swaths of the population. A troubled presidential transition has not eased uncertainty. Virginia has fared better than many other states, but significant challenges remain, challenges that will take political and public will to overcome in the years ahead.

In this chapter, we examine how the Commonwealth has fared during the COVID-19 pandemic. We highlight the shock to labor markets and discuss how businesses have responded in the face of social distancing and stay-at-home orders. We explore the impacts of the coronavirus, the recession and protests on the well-being of Virginia's residents. Lastly, we consider what a recovery might look like and how long it could take.

Gross Domestic Product: Decline And Rebound

Real gross domestic product (GDP) is one of the headline measures of economic performance, as it estimates the real (after-inflation) dollar value of final goods and services produced in an area during a given period of time. GDP is an imperfect measure in that it does not capture nonmarket transactions (barter, for example), may understate the extent of the "gig economy" and does not place a value on household production. National and state GDP data typically lag two and three months, respectively, from the end of the most recent quarter. Quarterly data are also somewhat noisy and subject to revision, especially at the state level.¹

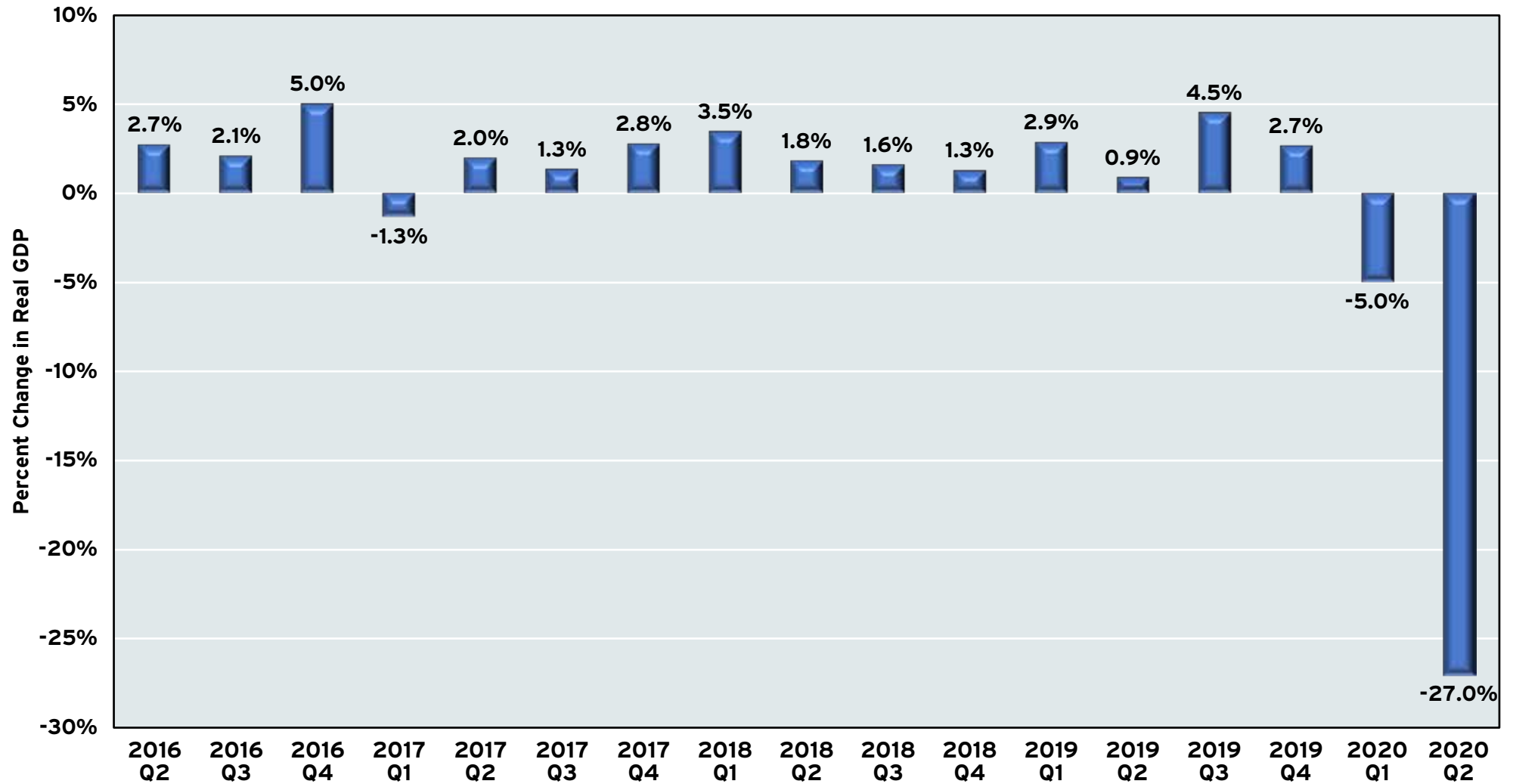
Prior to the onset of the COVID-19 pandemic and associated social distancing measures, there was a general sense of optimism about the economic prospects for the Commonwealth in 2020 and beyond. While projections of state-level GDP growth varied, there was consensus that Virginia would grow and, more importantly, grow faster than the nation. To say the onset of the pandemic dashed these forecasts would be an understatement. Very quickly, the conversation pivoted from one of how much the Commonwealth would grow to one of how much it would contract in 2020.

Graph 1 shows that the Virginia economy grew for a record 11 straight quarters, from the second quarter of 2017 to the fourth quarter of 2019. With the onset of the pandemic, economic activity contracted by 5% on an annualized basis during the first quarter of 2020. As restrictions on economic and social activities were most stringent during the second quarter of 2020, it should be no surprise that real GDP contracted by 27% on an annualized basis during this period. To put this in perspective, the most significant quarterly contraction prior to the second quarter of 2020 was the fourth quarter of 2007, when real GDP for Virginia fell at an annualized rate of 5.4%. There was a sliver of good news in that economic activity contracted less in Virginia (-27% for 2020 Q2) than the United States (-31.4% for 2020 Q2).

¹ We revisit Graph 1 in each *State of the Commonwealth Report*. In the 2018 report, for example, the Bureau of Economic Analysis estimated real GDP growth in 2017 Q1 was 0.8%, but this was later revised downward to -1.0%. In 2020, the Bureau of Economic Analysis revised 2017 again, down to -1.3%, illustrating how revisions can affect the data..

GRAPH 1

**ANNUALIZED PERCENTAGE CHANGE IN QUARTERLY REAL GROSS DOMESTIC PRODUCT:
VIRGINIA, 2016 Q2 TO 2020 Q2**



Sources: Bureau of Economic Analysis, 2020, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Table SQGDP9, real GDP by state. Millions of chained 2012 dollars.

While forecasting economic activity in 2020 may seem like an exercise in futility, we project that the Commonwealth will rebound significantly in the third and fourth quarters of this year (Table 1). As we discuss throughout the chapter, the economic environment rapidly evolved from collapse to rebound to recovery. The economic volatility of the first three quarters of 2020 should moderate in the fourth quarter of 2020 and into 2021. In other words, we should observe a surge in activity associated with the relaxation of the most stringent social distancing measures in the third quarter of 2020. After that, economic activity should increase, albeit at a slower pace and subject to the toll of the COVID-19 pandemic.

COVID-19: The Impact On Small Businesses

In May 2020, the U.S. Census Bureau launched the Small Business Pulse Survey to track the impact of the pandemic on small businesses. Graph 2 illustrates how perceptions of overall conditions for small businesses in the Commonwealth changed from May 2020 to November 2020. For the week of May 2, 2020, approximately half of respondents in Virginia reported that COVID-19 had a large negative effect on overall business operations. Approximately 90% of respondents reported that the pandemic had a large or moderate negative impact on business operations.

In recent months, the survey data suggest that the impact of the COVID-19 pandemic and social distancing measures has moderated. By mid-November, the proportion of responses had shifted from a large negative impact to moderate or little impact. Approximately 30% of businesses continued to report a large negative impact, while almost 40% reported a moderate negative impact. About 1 in 4 Virginia businesses indicated that the pandemic had little or no effect by mid-November. For those businesses that survived the initial wave of economic disruption, the economic environment appears to be improving over time.

Given the significant economic shock associated with the pandemic, it should be no surprise that 1 in 4 respondents to the Small Business Survey reported a decrease in paid employees during the week of May 2, 2020 (Graph 3). Nationally, approximately 27.5% of respondents reported a decrease in the number of paid employees for this reference week, suggesting that the Commonwealth fared somewhat better in the initial stages of the pandemic. **The survey data also reinforce the argument that public and economic health are two sides of the same coin. As infections increased in Virginia and the nation in November, the percentage of businesses reducing the number of paid employees increased, eroding the gains made over the summer months. By the end of November, 1 in 9 Virginia businesses responded that they had decreased the number of paid employees. Without an effective, nationally coordinated public health response, the economic recovery will remain fragile.**

TABLE 1

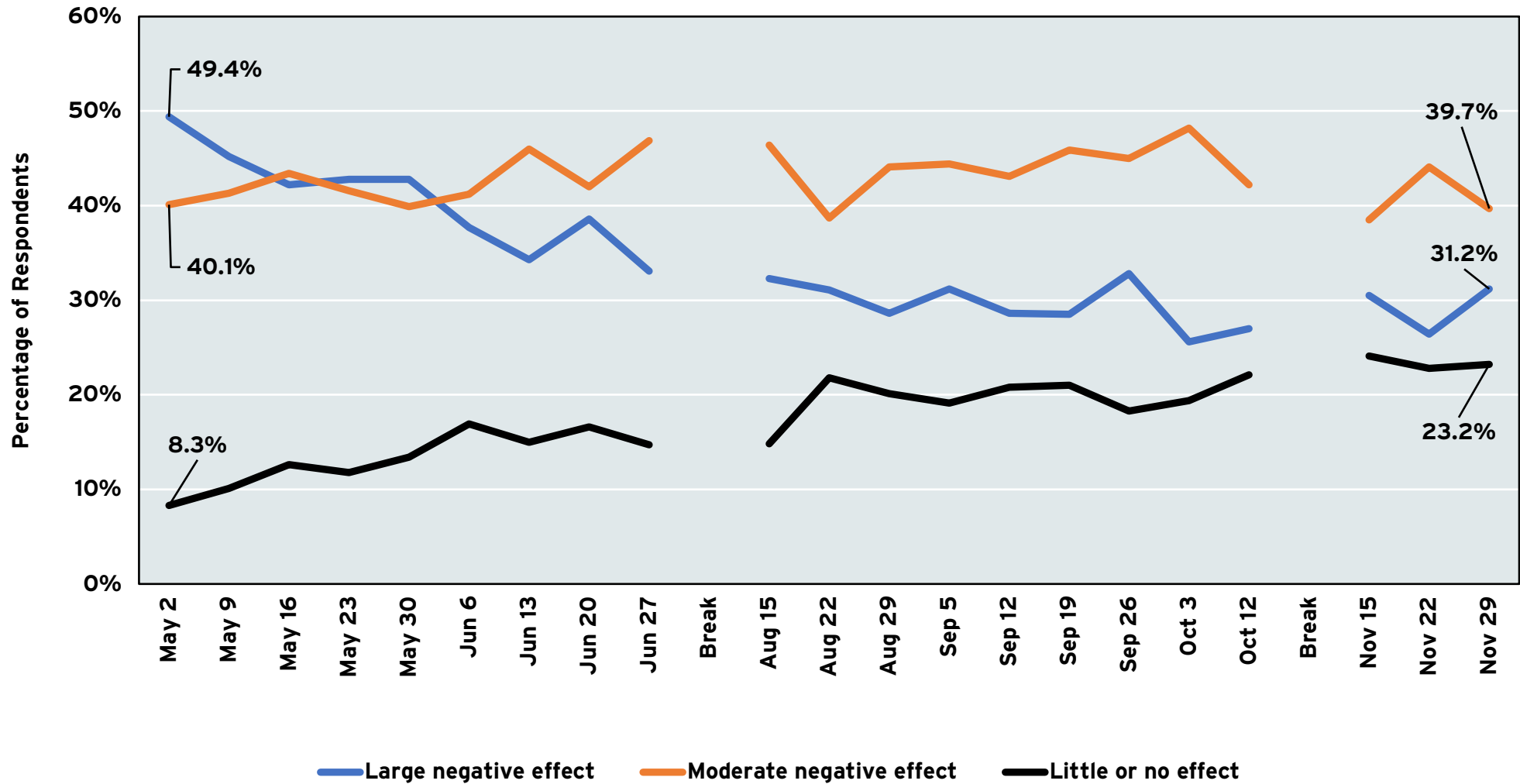
**QUARTERLY REAL GROSS DOMESTIC PRODUCT:
VIRGINIA AND THE UNITED STATES, 2017 Q1 TO 2020 Q4
(MILLIONS OF DOLLARS)**

| Year | United States | Virginia |
|---------|---------------|-----------|
| 2017 Q1 | \$17,977,299 | \$464,824 |
| 2017 Q2 | \$18,054,052 | \$467,113 |
| 2017 Q3 | \$18,185,636 | \$468,674 |
| 2017 Q4 | \$18,359,432 | \$471,890 |
| 2018 Q1 | \$18,530,483 | \$475,925 |
| 2018 Q2 | \$18,654,383 | \$478,049 |
| 2018 Q3 | \$18,752,355 | \$479,924 |
| 2018 Q4 | \$18,813,923 | \$481,443 |
| 2019 Q1 | \$18,950,347 | \$484,852 |
| 2019 Q2 | \$19,020,599 | \$485,923 |
| 2019 Q3 | \$19,141,744 | \$491,333 |
| 2019 Q4 | \$19,253,959 | \$494,566 |
| 2020 Q1 | \$19,010,848 | \$488,269 |
| 2020 Q2 | \$17,302,511 | \$451,258 |
| 2020 Q3 | \$18,583,984 | \$473,800 |
| 2020 Q4 | \$18,769,000 | \$478,860 |

Sources: Bureau of Economic Analysis, 2019, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. U.S. data from Table T10106 of the National Income and Product Accounts. Virginia data from Table SQGDP9, real GDP by state. Virginia estimate for 2020 Q3 and U.S. and Virginia estimates for 2020 Q4 represent our forecast.

GRAPH 2

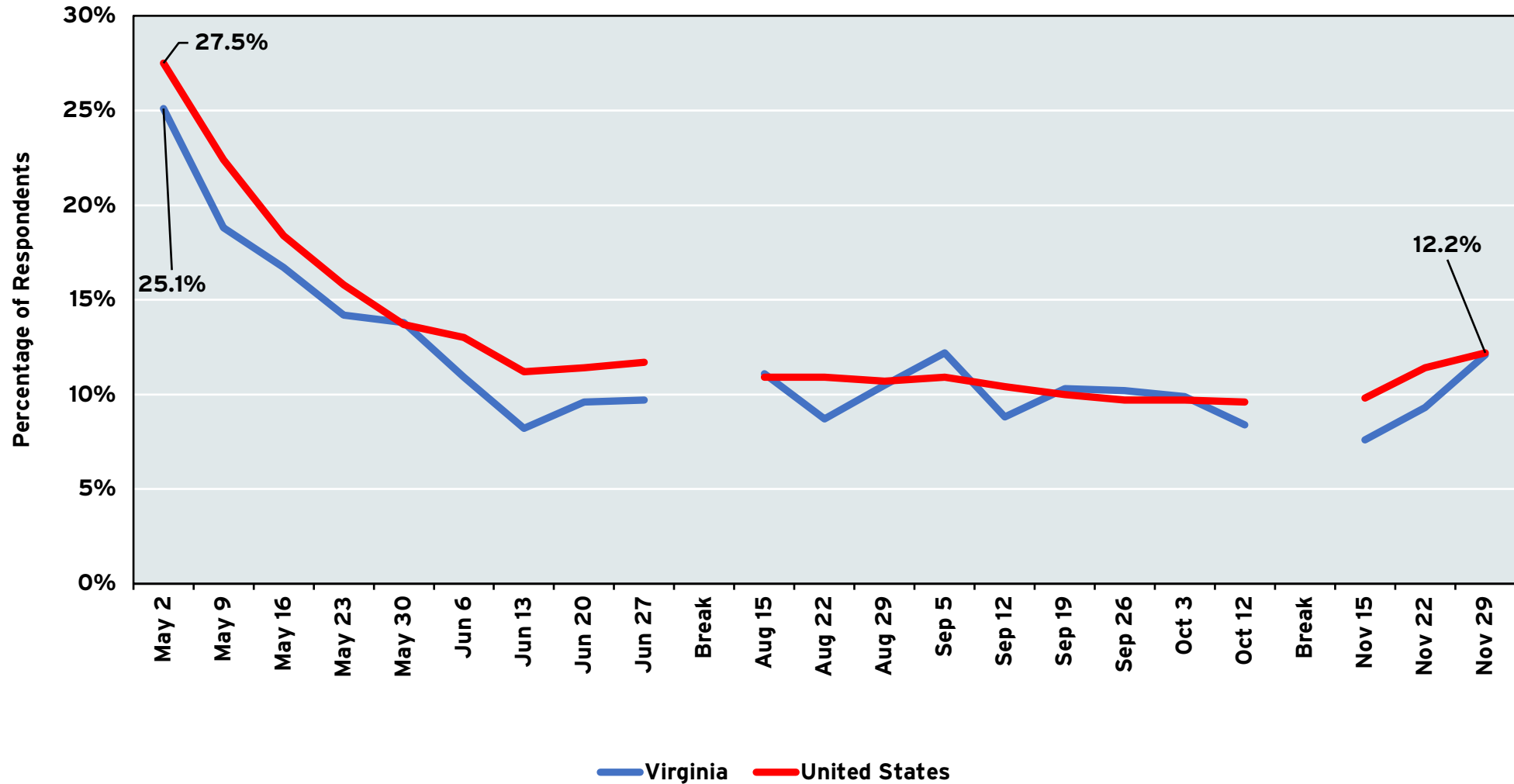
**SMALL BUSINESS PULSE SURVEY: OVERALL IMPACT ON BUSINESS OPERATIONS: VIRGINIA,
WEEK OF MAY 2, 2020 TO NOV. 29, 2020**



Sources: U.S. Census Bureau, Small Business Pulse Survey, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. Phase 1 of the survey was from April 2020 to June 2020. Phase 2 of the survey was from August 2020 to October 2020. Phase 3 of the survey will be from November 2020 to January 2021.

GRAPH 3

**SMALL BUSINESS PULSE SURVEY: BUSINESSES REDUCING THE NUMBER OF PAID EMPLOYEES:
UNITED STATES AND VIRGINIA, WEEK OF MAY 2, 2020 TO NOV. 29, 2020**



Sources: U.S. Census Bureau, Small Business Pulse Survey, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. Phase 1 of the survey was from April 2020 to June 2020. Phase 2 of the survey was from August 2020 to October 2020. Phase 3 of the survey will be from November 2020 to January 2021.

A Shock To The Labor Force And Employment

The COVID-19 pandemic and restrictions on social and business activity significantly and negatively impacted the number of Virginians in the civilian labor force and the number of individuals employed in the Commonwealth. To say that this resulted in an unprecedented shock to labor markets would appear to be an understatement. Even now, months after the onset of the pandemic, the question of how long it will take Virginia to recover its lost jobs remains. As temporary furloughs become permanent layoffs for some workers, will the recovery be fast, or will it follow a path similar to the one after the 2007-2009 financial crisis? Let's look at the details.

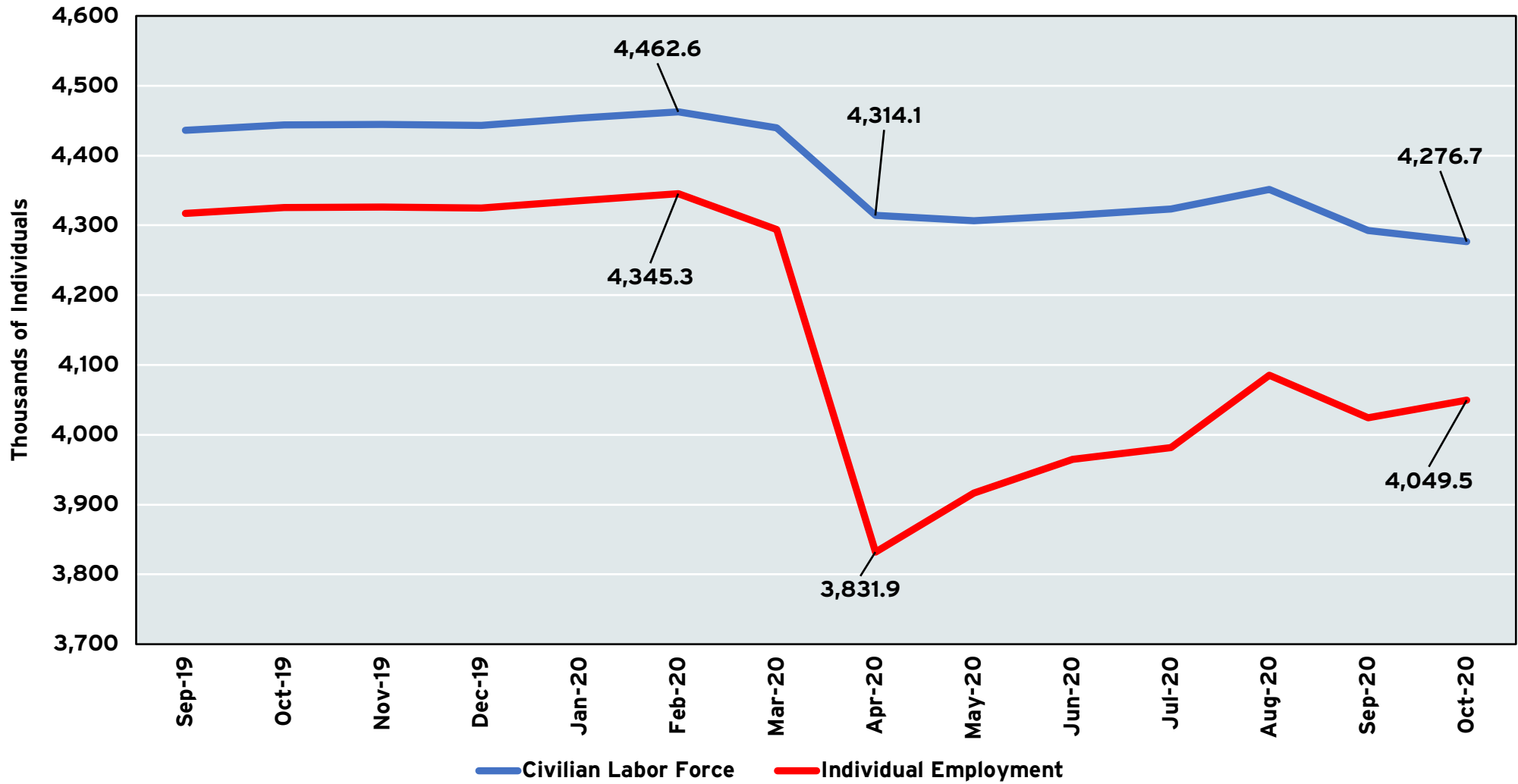
Graph 4 illustrates the impact of the COVID-19 pandemic on labor force and individual employment in the Commonwealth. The labor market is seasonal – that is, the number of people actively looking for work or gainfully employed declines in the winter and rises in the summer. In February 2020, the civilian labor force and individual employment were higher than almost every month in 2019, signaling a continued expansion in economic activity in the Commonwealth. The discussion early in 2020 focused on a shortage of skilled workers relative to the number of open positions in Virginia.

With the onset of the pandemic in March and increasing restrictions on economic activity in April, the civilian labor force and individual employment fell precipitously. From the peak of February 2020 to April 2020, the size of Virginia's civilian labor force fell by 3.3%. Over the same period, individual employment declined by 11.8%, or approximately 513,385 people. In the span of two months, 1 in 9 Virginians moved from gainful employment to a temporary furlough or, in some cases, a permanent layoff.

Individual employment and establishment employment data attempt to measure how many people are working at a given time. These data are from two different surveys: the Current Population Survey (CPS) and the Current Establishment Survey (CES). The CPS asks the civilian noninstitutionalized population whether they are working, looking for work or not attached to the labor force. The civilian labor force represents the civilian noninstitutionalized population that is either working or actively looking for work, while individual employment reflects those in the labor force who are working. The CES asks employers about their employees. There is an important difference between the CPS and CES. An individual can only be employed once in the CPS – that is, an individual either is working, unemployed or not seeking to work. In the CES, an individual can show up multiple times if he or she has different jobs with different employers. For clarity, we present the CPS data as “individual employment” and the CES data as “jobs.”

GRAPH 4

**CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT:
VIRGINIA, SEPTEMBER 2019 TO OCTOBER 2020**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted. October 2020 data are preliminary.

Since the nadir of the economic shock in April 2020, we have observed two distinct phenomena: a rapid recovery in employment in late spring and early summer and a slowing recovery entering the fall. The civilian labor force increased in June, July and August of 2020 but failed to return to the prepandemic peak observed in February. Individual employment rebounded from a low of approximately 3.83 million Virginians in April 2020 to 4.09 million Virginians in August 2020.

More recent data suggest that the recovery is slowing. The labor force declined in September and October. Employment declined in September and recovered slightly in October. While some of these declines can be attributed to seasonal variations in the economy, a larger concern is that we are witnessing a transition to a much slower recovery than observed in the summer months.

One possible explanation for the recent decline in the civilian labor force and individual employment is the disproportionate impact of COVID-19 on child care and primary education. Numerous surveys of public school students and their parents show that the rapid move to online instruction in the spring was largely perceived as a failure.² With the school closures came increased anxiety and depression among children.³ Even more concerning was the disproportionate burden on lower-income children and those needing specialized instruction. Economists are increasingly concerned about the downstream impacts of keeping schools closed, which could affect up to 50 million American workers.⁴ A recent study estimated that more than 20% of health care workers encountered difficulty obtaining child care.⁵ Also, a recent World Bank paper estimated that the cost of school closures in the U.S. could approach 15% of annual GDP if one accounts for the reduction in future earnings.⁶ While there are benefits from school closures in terms of a reduced number of infections, the emerging evidence indicates that the economic and social costs far outweigh these benefits.

Data from Fairfax County Public Schools illustrate that school closures have impacted students differently. Students who performed well academically prior to the pandemic appear to have managed the transition to remote schooling. Students who struggled academically prior to the pandemic, on the other hand, have performed markedly worse. Failing grades have increased 83% for students who failed two or more classes in 2019. Failing grades are up 106% for English language learners and 111% for special education students. Reports from other school districts in Virginia and the nation suggest this is not an uncommon problem.⁷

Graph 5 shows the impact of the pandemic on labor force participation rates in the United States. In February 2020, 69.3% of men and 57.8% of women were considered part of the civilian labor force. By April, labor force participation fell by 2.8 percentage points for men and 3.1 percentage points for women. The rapid declines in labor force participation illustrate the disruptive impact of the pandemic and the policy response on the American economy.

From April to November 2020, labor force participation rose by 1.3 percentage points and 1.2 percentage points for men and women, respectively. However, these gains largely occurred in the summer months and have moderated significantly, if not reversed somewhat in the fall. From August to November 2020, labor force participation fell by 0.3 percentage points and 0.2 percentage points for men and women, respectively. Economic and public health are tightly linked. It should be no surprise that the declines in labor force participation in the fall of 2020 coincided with rapid rises in COVID-19 infections, hospitalizations and deaths.

2 https://richmond.com/news/virginia/online-in-person-or-both-across-virginia-school-reopening-is-the-hot-button-issue-of/article_4f6a5a1f-a228-5b1a-8778-6610ca6d274c.html.

3 <https://www.psychologytoday.com/us/blog/hope-resilience/202006/the-impact-prolonged-school-closures-children>.

4 https://bfi.uchicago.edu/wp-content/uploads/BFI_WP_202046.pdf.

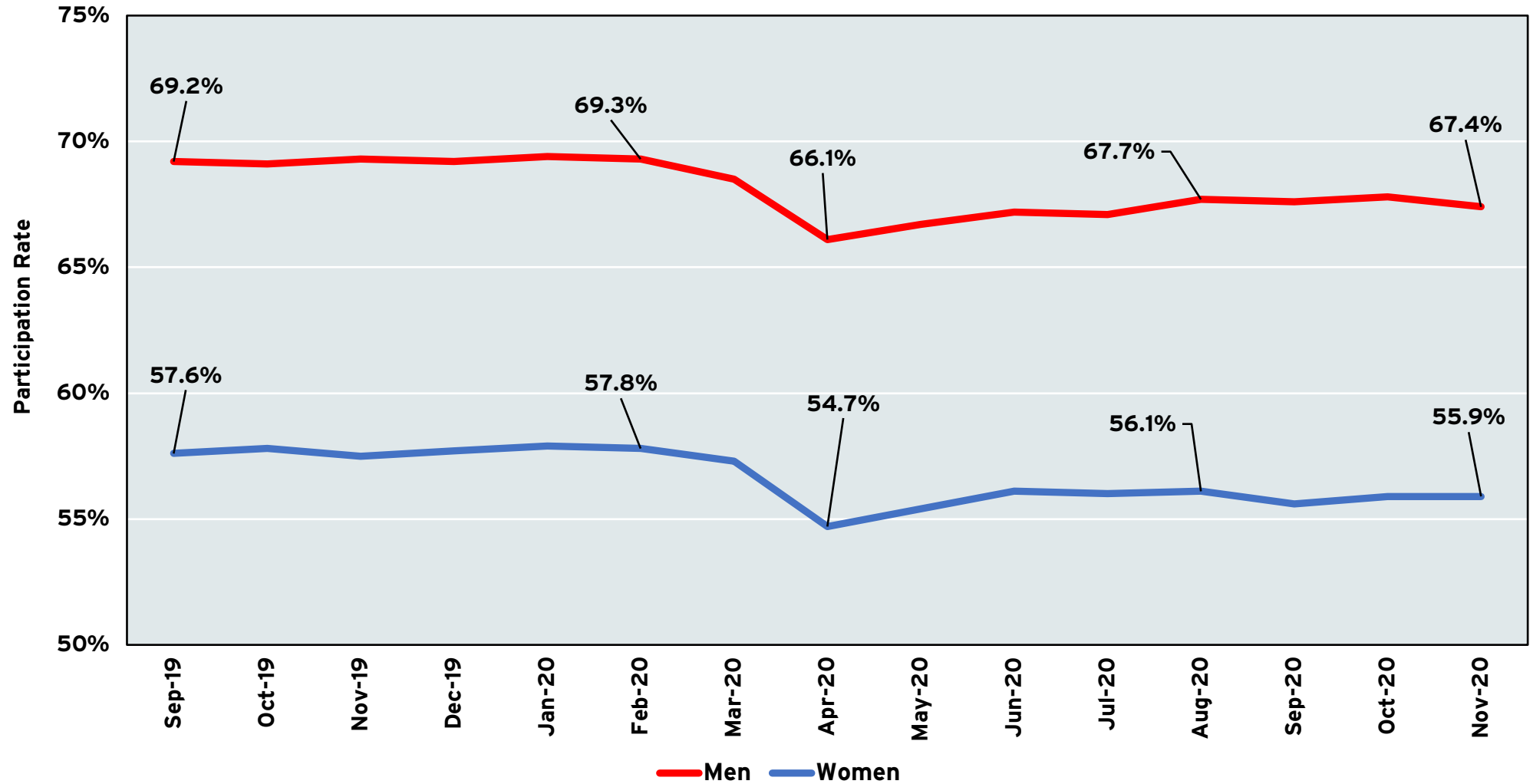
5 <https://www.sciencedirect.com/science/article/pii/S2468266720300827>.

6 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3601422.

7 <https://www.nbcwashington.com/news/local/northern-virginia/fairfax-county-students-failing-more-classes-during-distance-learning/2486563/>.

GRAPH 5

LABOR FORCE PARTICIPATION RATES BY GENDER: UNITED STATES, SEPTEMBER 2019 TO NOVEMBER 2020



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted. Civilian labor force is 16 years and older. November 2020 data are preliminary.

Unemployment Rises, Falls And Rises In The Commonwealth

With the contraction in employment in March and April 2020, it should be no surprise that the headline unemployment rate in Virginia jumped from 2.6% in February 2020 to 11.2% in April 2020 (Graph 6). This was the highest unemployment rate for the Commonwealth since recording began in 1990. Since April, the unemployment rate has steadily declined, falling to 5.3% in October 2020.

Yet, the unemployment rate in October understates the true extent of unemployment in the Commonwealth. The headline unemployment rate is equal to the ratio of the number of unemployed to the civilian labor force. Exits from the labor force bias the unemployment rate downward. If these individuals had remained in the labor force as unemployed, the Commonwealth's unemployment rate would be approximately 7.0% in October 2020, not 5.3%. Virginians leaving the labor force is a discouraging sign. We also know that individuals who depart the labor force are less likely to return to gainful employment than those who remain in the labor force. Bringing these Virginians back into the labor force is a crucial element for a sustained recovery in 2021.

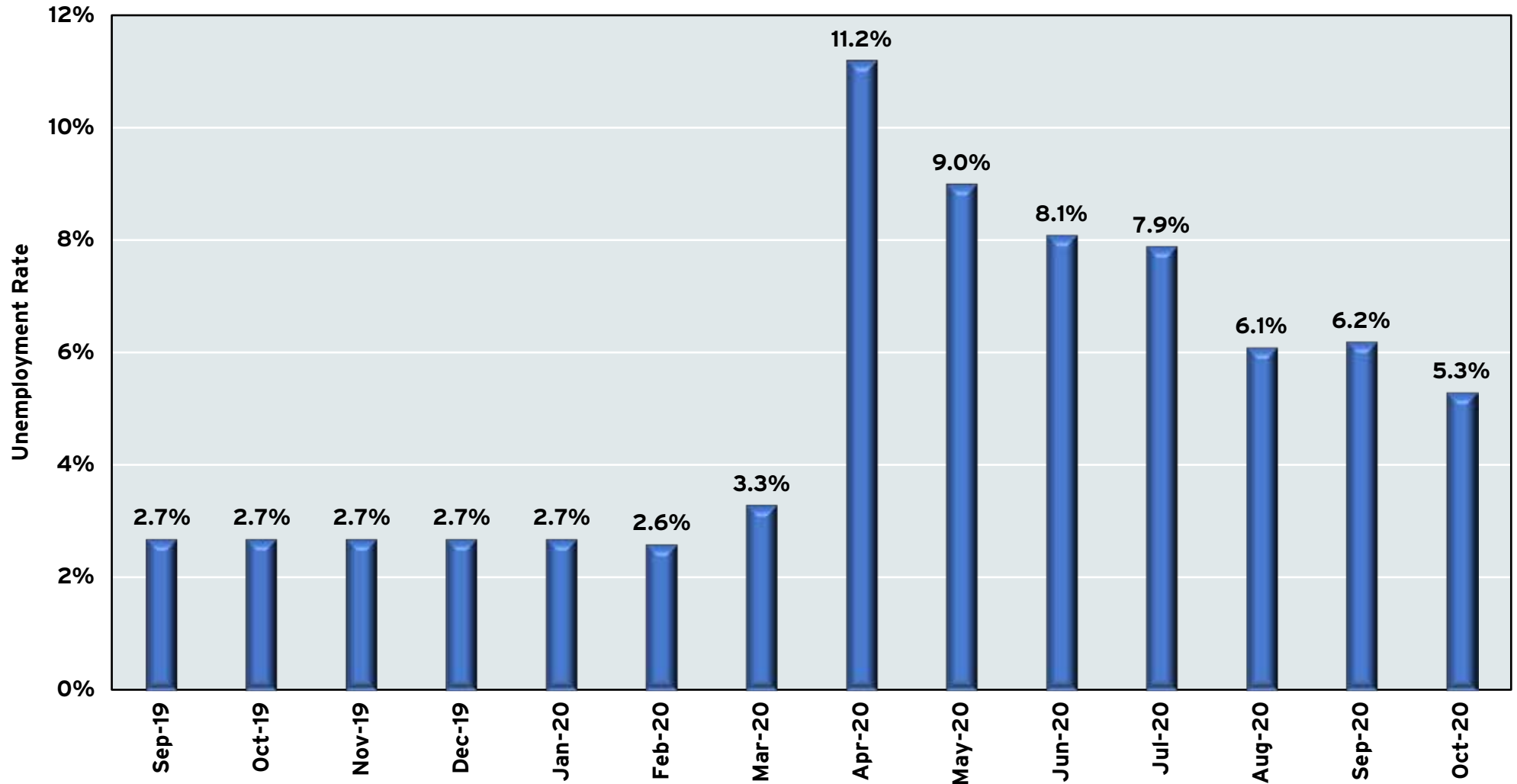
Virginia's metropolitan statistical areas (MSAs) were also adversely impacted by the pandemic, although the impact and recovery have not been equally distributed across the Commonwealth. A comparison of unemployment rates by metro area in October 2019 and October 2020 highlights these disparities in Graph 7. The Virginia Beach-Norfolk-Newport News MSA (Hampton Roads) experienced one of the more significant increases in the unemployment rate, in part due to the impact of COVID-19 on the Port of Virginia and the hospitality and tourism industry. The Richmond MSA also has been significantly affected, due to the decline in the hospitality and tourism industry and the negative impact of COVID-19 on state and local government revenues.

Initial unemployment claims represent the number of people who have filed a request for benefits after separation from an employer. Continuing claims, or what is known as insured unemployment, reflect those who have already filed their initial claims, had the claims accepted by the government and continue to file claims to receive benefits for the current week of unemployment. In other words, continuing claims show the number of insured unemployed individuals, while initial claims reflect the number of initial requests for unemployment benefits in each week.



GRAPH 6

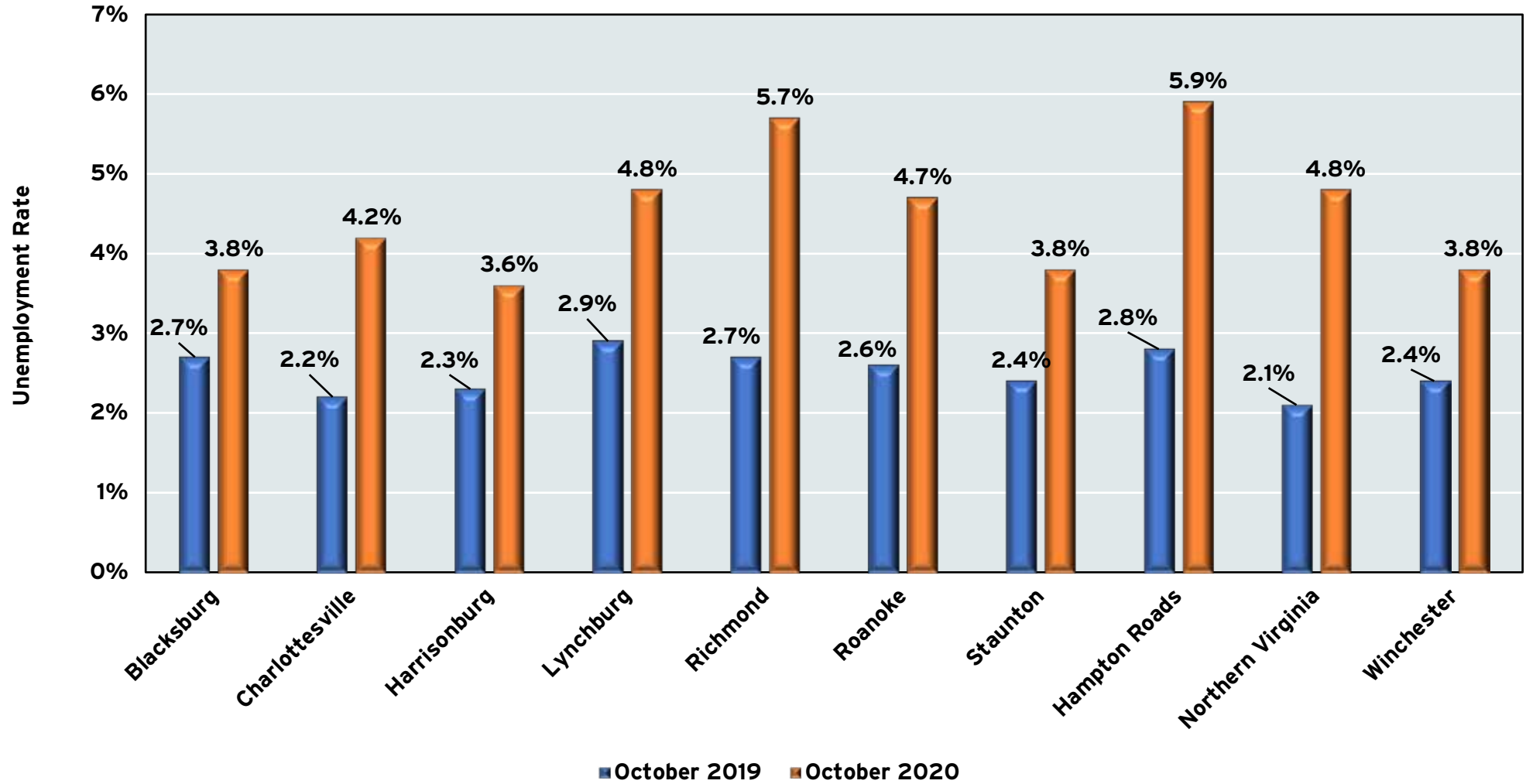
**HEADLINE UNEMPLOYMENT RATE (U3):
VIRGINIA, SEPTEMBER 2019 TO OCTOBER 2020**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted. October 2020 data are preliminary.

GRAPH 7

**HEADLINE UNEMPLOYMENT RATE (U3):
VIRGINIA METROPOLITAN AREAS, OCTOBER 2019 AND OCTOBER 2020**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

Unemployment Claims Remain At Historic Levels

The use of the adjectives “historic” or “unprecedented” to describe the scale of layoffs resulting from the emergence of COVID-19 and the ensuing restrictions on economic activity soon became an exercise in repetition in March and April 2020. Initial and continuing unemployment claims shattered existing records and, at points, appeared to overwhelm the unemployment insurance system in Virginia and other states. Even now, nearing the end of 2020, continuing unemployment claims remain persistently high, signaling an increase in permanent layoffs in Virginia and the United States.

Graphs 8 and 9 illustrate the rise in monthly initial unemployment claims – for example, from 9,214 claims in February 2020 to 371,411 claims in April 2020. To place this in perspective, the highest level of monthly initial claims during the Great Recession of 2007-2009 was 58,560. In other words, the initial unemployment claims peak in 2020 was 6.3 times higher than the peak during the Great Recession. The massive increase in unemployment claims reflected the turmoil in labor markets in Virginia and the United States. Even more, months after the onset of the pandemic, the level of unemployment claims would have been considered historic in any other recorded recession.

Since the peak of April 2020, filings of initial unemployment claims have moderated in the Commonwealth. In October, 88,814 Virginians filed an initial claim for unemployment benefits. While this was a marked decline from the peak of April, it is also a signal of how far Virginia has to go to recover from the economic shock of the pandemic. As we now move from fall into winter, initial claims may increase due to the seasonal downturn in the tourism and hospitality industries as well as the prospect of increased coronavirus cases in Virginia and other states.

Initial unemployment claims are one part of the story. Temporary furloughs may not remain on the unemployment rolls for an extended period of time, as workers are recalled to work when economic conditions improve. If layoffs become permanent, however, workers may claim

unemployment for an extended duration. Graph 10 illustrates monthly continuing unemployment claims in Virginia from September 2007 to October 2020.

Prior to 2020, the record for continuing unemployment claims in Virginia was 93,828 for March 2009, near the official end of the Great Recession. In May 2020, there were 394,851 continuing unemployment claims, 4.2 times higher than the peak observed during the Great Recession (Graph 11). While continuing claims have declined in the Commonwealth from this peak, there were still 131,923 continuing claims in October 2020. The level of continuing claims in October was 1.4 times higher than the previous record of 93,828 observed in March 2009. The lingering effects of the economic shock suggest that a recovery will last well into 2021, if not into 2022.

Table 2 presents initial unemployment claims for each of Virginia’s MSAs and the share of each metro area in Virginia’s initial unemployment claims. Comparing October 2019 to October 2020 provides insight into the magnitude of the continuing economic shock across Virginia’s metro areas. With the exception of the Blacksburg metro area, initial unemployment claims are significantly higher in 2020 than for the same period in 2019.

It is important to note that three metro areas – Hampton Roads, Northern Virginia and Richmond – account for 73.1% of the labor force in the Commonwealth. However, in October 2020, these metros accounted for only about 63% of initial unemployment claims in the state. Broadening our analysis, all the metro areas in the Commonwealth comprised 89% of the labor force but only 72.7% of initial claims in October. Nonmetro areas, which were approximately 11% of the labor force, comprised 27.3% of initial claims.

The disproportionate level of initial claims in nonmetro areas of the Commonwealth is illustrative of the growing urban-rural divide. The unanswered question is whether these jobs will return in the future, or whether we are witnessing a further reallocation of employment to more populated areas of Virginia. Working to address this divide is one of the Commonwealth’s most significant policy challenges of the coming decade.

TABLE 2

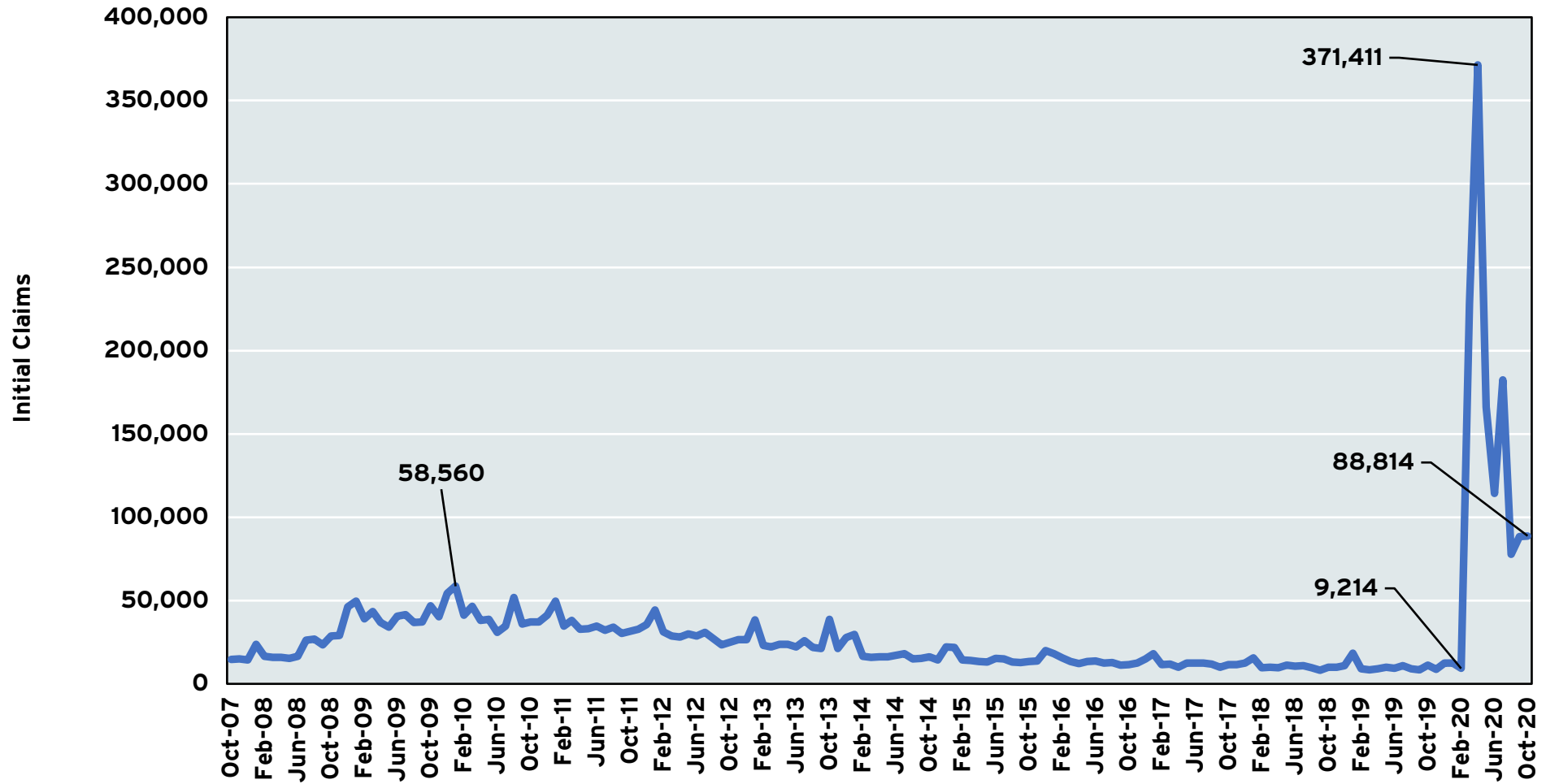
**MONTHLY INITIAL UNEMPLOYMENT CLAIMS:
VIRGINIA METROPOLITAN AND NONMETROPOLITAN AREAS, OCTOBER 2019 AND OCTOBER 2020**

| Metro Areas | October 2019 Initial Claims | October 2020 Initial Claims | Percentage Change | Labor Force as Percent of Virginia Labor Force | Share of Virginia's October 2020 Initial Claims |
|---|--|--|--------------------------|---|--|
| Blacksburg- Christiansburg-Radford | 1,201 | 906 | -25% | 2.1% | 1.0% |
| Charlottesville | 126 | 1,548 | 1,129% | 2.8% | 1.7% |
| Harrisonburg | 51 | 492 | 865% | 1.5% | 0.6% |
| Lynchburg | 237 | 1,783 | 652% | 2.8% | 2.0% |
| Richmond | 1,676 | 13,768 | 721% | 15.6% | 15.5% |
| Roanoke | 329 | 2,579 | 684% | 3.6% | 2.9% |
| Staunton-Waynesboro | 99 | 698 | 605% | 1.4% | 0.8% |
| Virginia Beach-Norfolk- Newport News | 2,166 | 18,869 | 771% | 19.5% | 21.2% |
| Washington-Arlington- Alexandria | 1,825 | 23,275 | 1,175% | 38.0% | 26.2% |
| Winchester | 112 | 707 | 531% | 1.7% | 0.8% |
| Metropolitan Areas in Virginia | 7,822 | 64,625 | 726% | 89.0% | 72.7% |
| Nonmetropolitan Areas in Virginia | 3,311 | 24,189 | 631% | 11.0% | 27.3% |
| Virginia | 11,133 | 88,814 | 698% | - | - |

Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. Virginia portion of each metropolitan area. Metropolitan area labor force as a percentage of Virginia's total labor force estimated using 2019 annual averages.

GRAPH 8

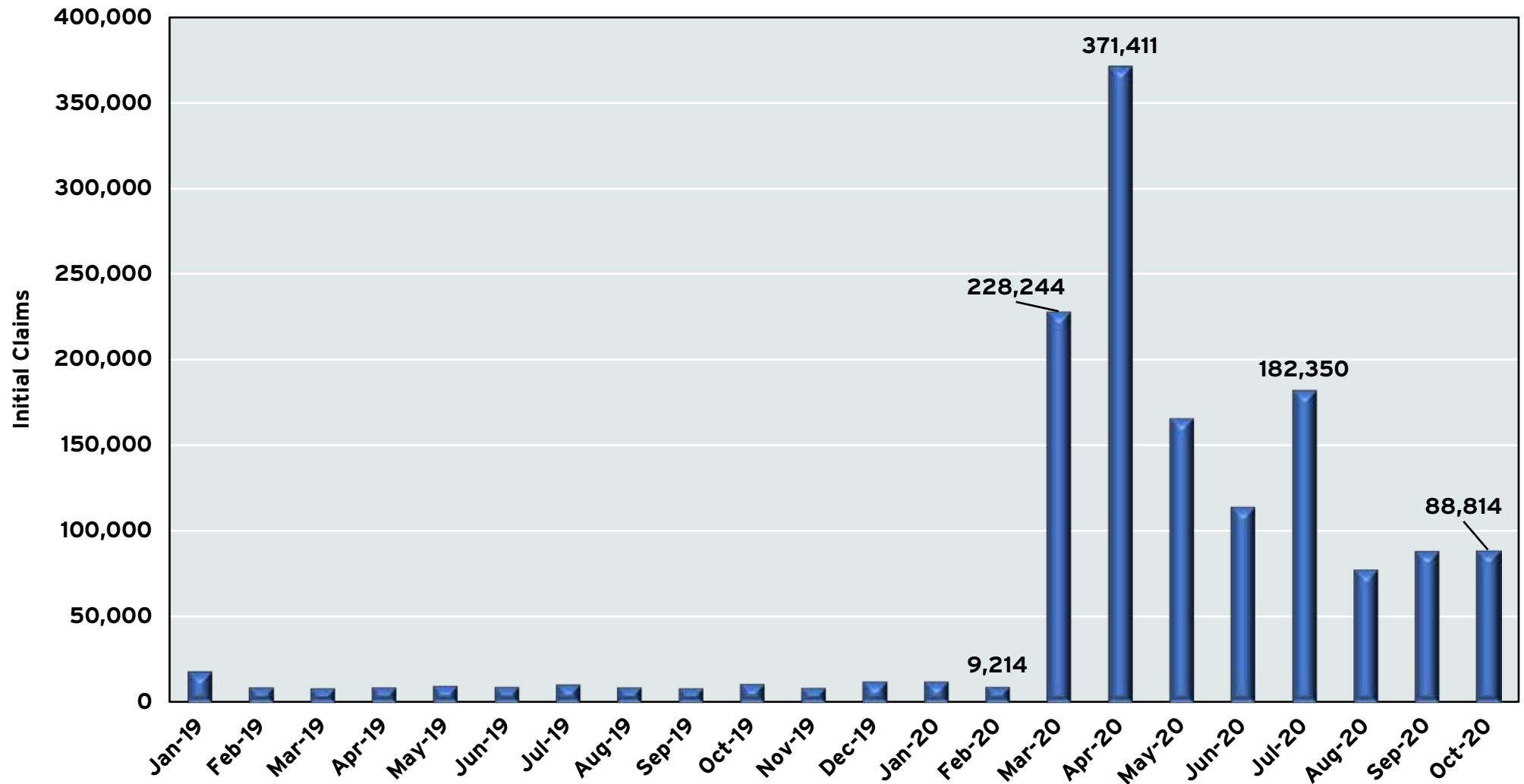
MONTHLY INITIAL UNEMPLOYMENT CLAIMS:
VIRGINIA, OCTOBER 2007 TO OCTOBER 2020



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 9

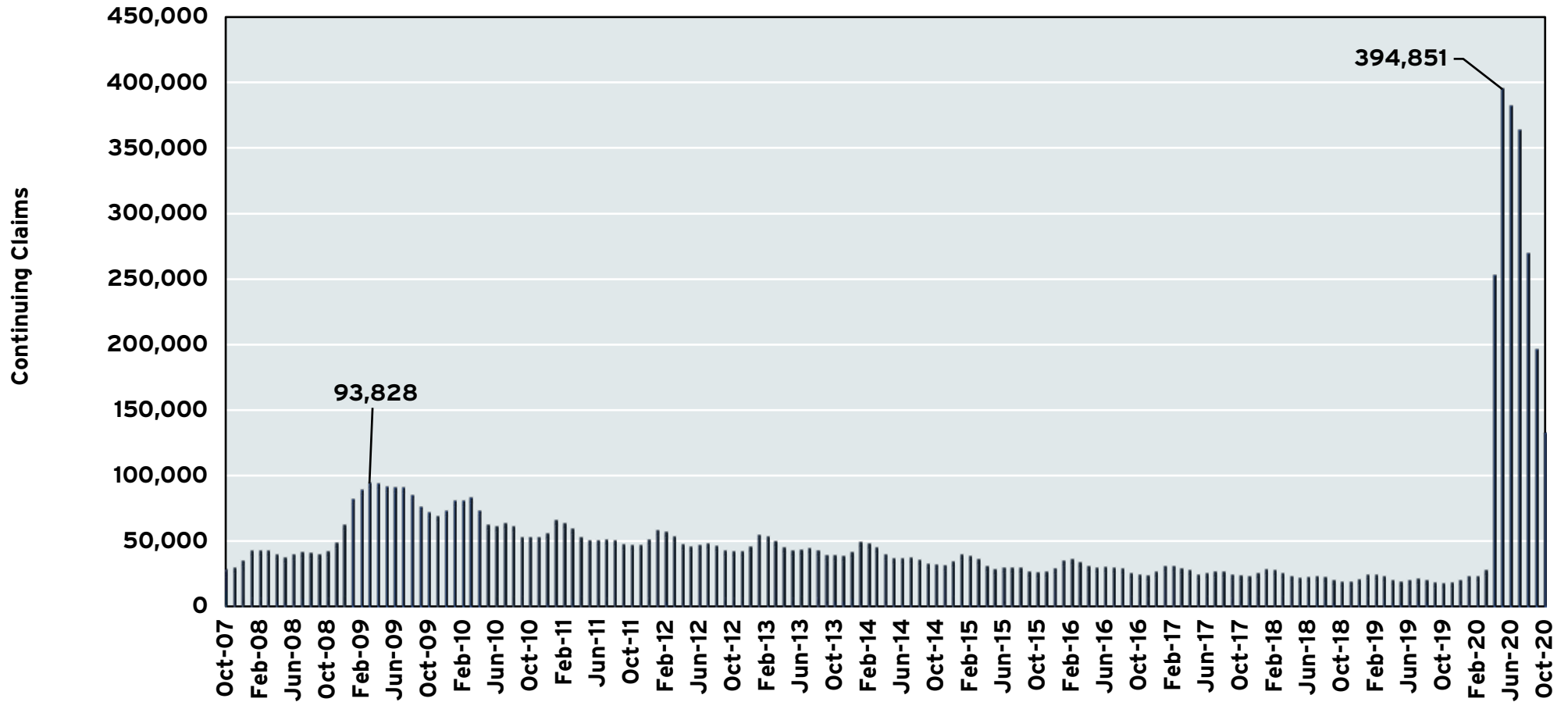
**MONTHLY INITIAL UNEMPLOYMENT CLAIMS:
VIRGINIA, JANUARY 2019 TO OCTOBER 2020**



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 10

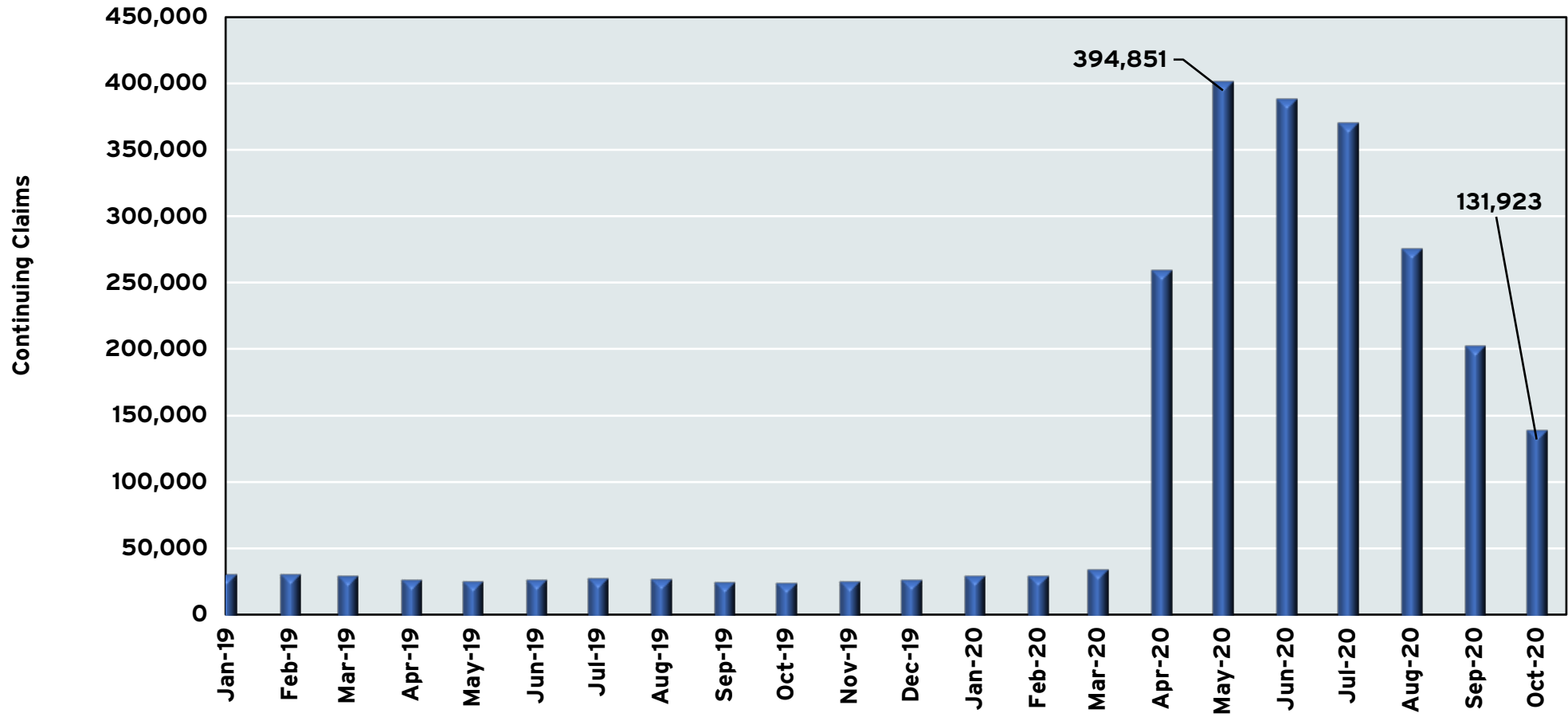
AVERAGE MONTHLY CONTINUING UNEMPLOYMENT CLAIMS:
VIRGINIA, OCTOBER 2007 TO OCTOBER 2020



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. The average number of weekly continuing claims in each month based on the week-ending month.

GRAPH 11

**AVERAGE MONTHLY CONTINUING UNEMPLOYMENT CLAIMS:
VIRGINIA, JANUARY 2019 TO OCTOBER 2020**



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. The average number of weekly continuing claims in each month based on the week-ending month.

Jobs: A Sharp Drop, Rapid Recovery And Slowing Growth

The COVID-19 pandemic and associated social distancing measures wiped out nearly a decade of job gains in Virginia in two months. From the trough after the Great Recession in February 2010, Virginia added approximately 502,000 jobs by February 2020 (Graph 12). By April 2020, about 438,000 jobs were temporarily furloughed or permanently laid off. Since April, a significant number of jobs had returned, signaling that these layoffs were temporary. By October 2020, Virginia had recovered about 199,900 jobs from the April 2020 trough. Of concern is the moderation in job growth in September and October of 2020. Slowing job growth potentially signals a much longer recovery than initially expected in the summer of 2020.

We see a similar story across Virginia’s metropolitan areas. Table 3 shows the number of metro-area jobs in the Commonwealth prior to the pandemic, in the depths of the pandemic and more recently from the latest data available. In February 2020, MSAs in Virginia had accumulated thousands of jobs since the trough of the job market following the Great Recession. By the trough of the current economic shock, four metro areas – Blacksburg, Hampton Roads, Lynchburg and Roanoke – had seen temporary furloughs wipe out the job gains of the last decade. There has been a recovery since the depths of spring 2020, but no MSA has had jobs return to the levels seen in February 2020.

The impact of the pandemic is also apparent when we compare job growth over the last year. Graph 13 shows the percentage change in jobs between October 2019 and October 2020. Staunton has outperformed all other Virginia metro areas and the nation as the only area with more jobs in October 2020 compared to a year ago. Winchester, which added more jobs over 2010-2019 than any other Virginia metro area and the nation, had the largest decline in jobs in September 2020 compared to 2019. One out of every 13 jobs in the Winchester metro area had yet to return by October 2020. One should caveat, however, that Winchester accounts for less

than 2% of all jobs in Virginia. Three metro areas – Northern Virginia, Hampton Roads and Richmond – accounted for nearly 70% of all jobs in the Commonwealth. The recovery in these metros has been stronger than that of the nation.

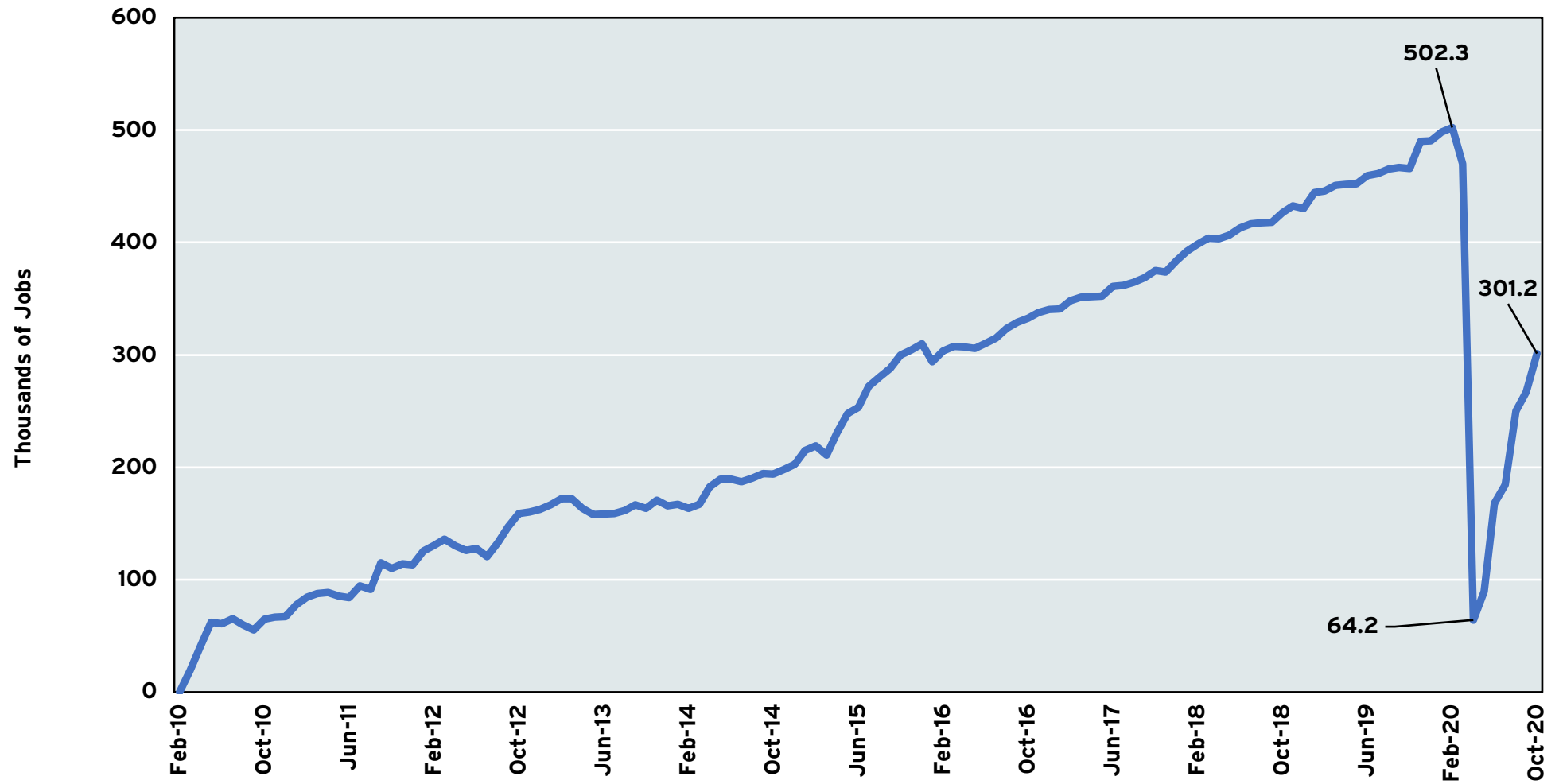
TABLE 3
CUMULATIVE GROWTH IN NONFARM PAYROLLS (JOBS):
UNITED STATES, VIRGINIA AND VIRGINIA METROPOLITAN AREAS,
FEBRUARY 2010 TO OCTOBER 2020
(THOUSANDS OF JOBS)

| Metro Areas | Cumulative Job Growth from Great Recession Trough to February 2020 | Cumulative Job Growth from Great Recession Trough to COVID-19 Trough | Cumulative Job Growth from Great Recession Trough to October 2020 |
|-------------------------------------|--|--|---|
| Blacksburg-Christiansburg | 8.2 | -3.8 | 3.7 |
| Charlottesville | 21.4 | 9.8 | 15.5 |
| Harrisonburg | 9.8 | 1.7 | 5.1 |
| Lynchburg | 3.5 | -6.7 | -2.7 |
| Richmond | 111 | 34.2 | 69.8 |
| Roanoke | 9.1 | -6.8 | 1.6 |
| Staunton | 5 | 3 | 5.8 |
| Virginia Beach-Norfolk-Newport News | 65.1 | -22.3 | 38.6 |
| Winchester | 13.5 | 5.5 | 8.2 |
| Northern Virginia | 242.1 | 86.4 | 169.7 |
| Virginia | 502.3 | 64.2 | 301.2 |
| United States | 22,765 | 605 | 12,675 |

Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted. Cumulative job growth from trough of the Great Recession. Great Recession trough for all areas in February 2010, except Lynchburg (February 2012), Blacksburg (December 2009) and Winchester (October 2009). COVID-19 trough in May 2020 for Blacksburg, Lynchburg, Northern Virginia and Roanoke. COVID-19 trough for all other areas in April 2020.

GRAPH 12

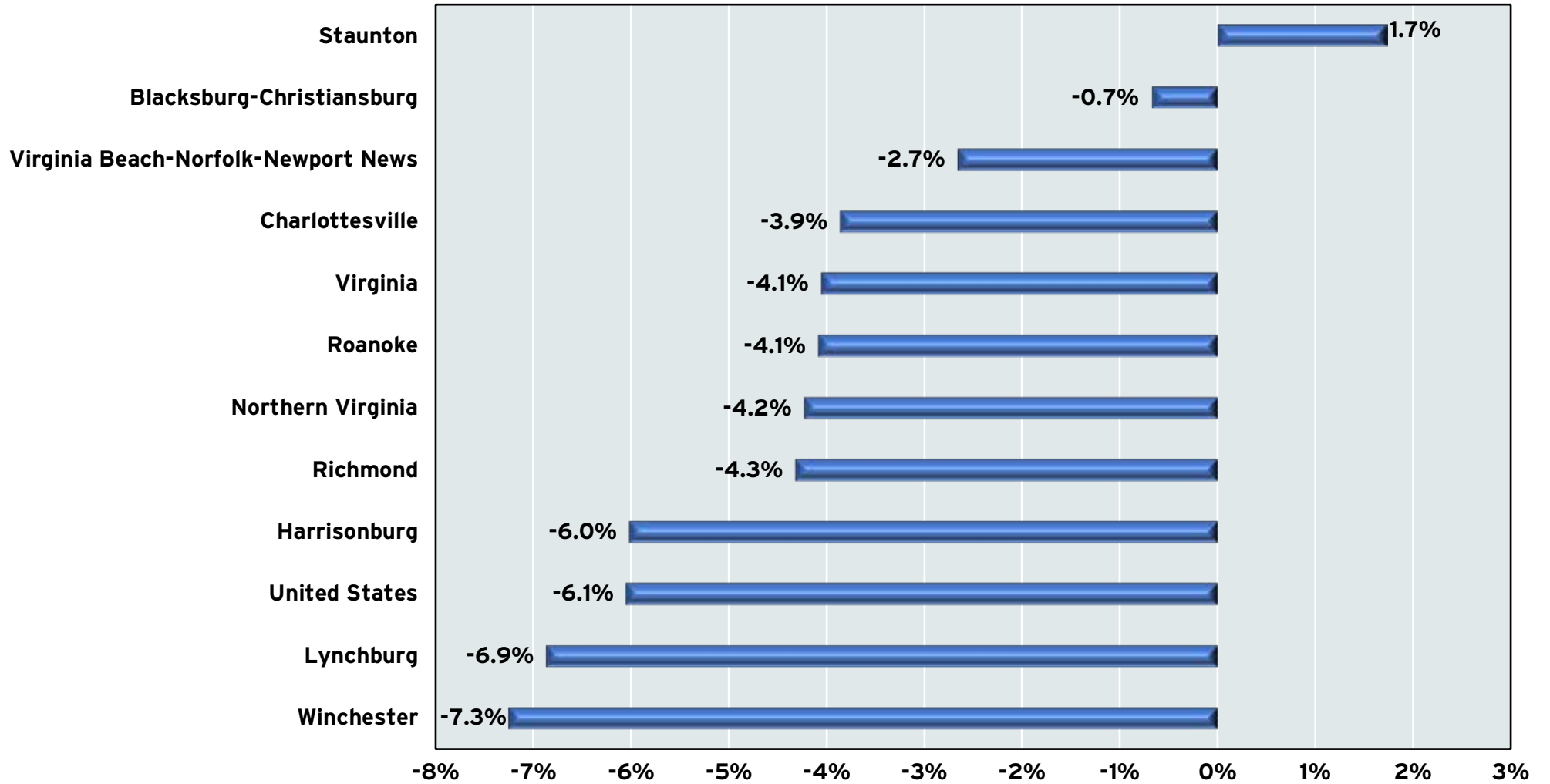
CUMULATIVE GROWTH IN NONFARM PAYROLLS (JOBS):
VIRGINIA, FEBRUARY 2010 TO OCTOBER 2020



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 13

PERCENTAGE CHANGE IN NET NEW CIVILIAN JOBS:
UNITED STATES, VIRGINIA AND SELECTED METROPOLITAN AREAS, OCTOBER 2019 TO OCTOBER 2020



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

Real Estate Weathers The Pandemic (So Far)

The single-family housing market struggled in past recessions. A downturn in economic activity usually causes people to hold off on purchasing a home. An economic downturn that leads to increased layoffs can also cause some to fall behind on mortgage payments, resulting in a rising number of foreclosures. The Great Recession significantly impacted Virginia's real estate market. In 2011, following the recession, the number of building permits for single-family residential homes had fallen by more than half when compared to prerecessionary levels observed in 2005.

The real estate market in the COVID-19 recession, however, has not experienced (so far) a downturn, as was the case in previous recessions. Single-family housing, in fact, has been a bright spot. Residential construction typically falls during a recession, so it should be no surprise that single-family residential building permits declined in April 2020 (Graph 14). Yet, the decline was short lived, with building permits rising rapidly in Virginia and peaking in July 2020. Developers have continued to apply for permits, with levels in August, September and October 2020 well above those observed during the same months in 2019.

The value of the single-family building permits also recovered swiftly from the onset of the pandemic (Graph 15). While the monthly value of building permits dipped in April and May 2020, the recovery in the summer erased these declines. It appears that developers may have paused for a short period during the spring and resumed apace in the summer of 2020.

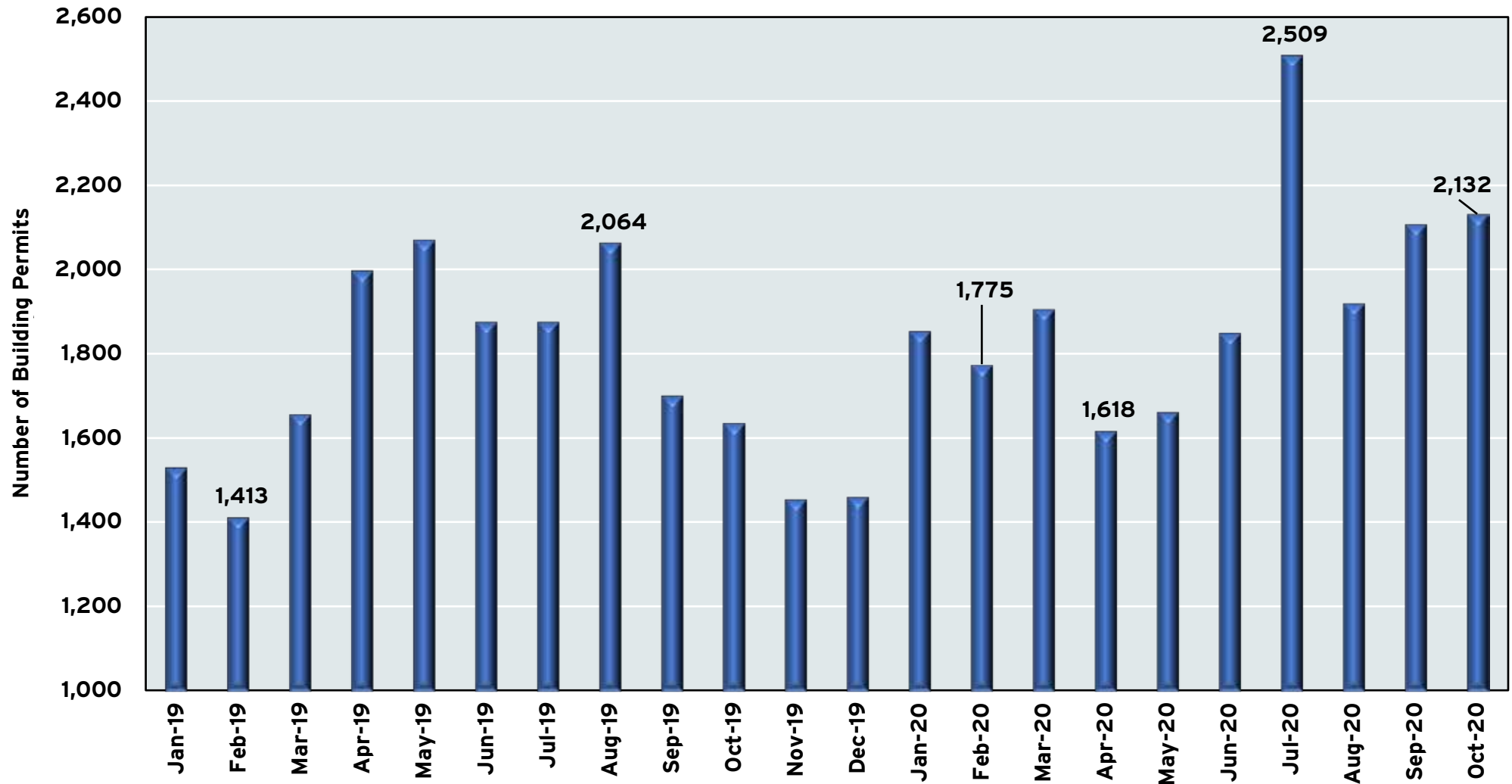
One reason we continue to observe strong activity in single-family home construction is the steady rise in single-family house prices in the Commonwealth (Graph 16). In January 2012, the median value of a single-family home was \$226,653 in Virginia. By February 2020, the median value had risen to \$287,166. Even in the depths of restrictions on economic and social activity, median home values in the Commonwealth continued to rise. By October 2020, the median single-family home value had climbed to \$299,164, an increase of 4.5% from January 2020.

There are several possible reasons why home sales and prices have not fallen (yet) in the face of the COVID-19 recession. First, layoffs appear to be concentrated in relatively low-wage industries and many homeowners may have been able to work remotely. Second, increased unemployment benefits through the Pandemic Unemployment Assistance (PUA) program may have allowed unemployed homeowners to meet their mortgage obligations. Third, interest rates have fallen and are likely to remain historically low over the coming year (if not two). Lower interest rates for residential mortgages lower the cost of borrowing, increasing the demand for single-family housing. Fourth, the supply of single-family housing has fallen over time, leading to an increasing number of buyers competing for a smaller number of houses. These conditions are likely to continue through most of 2021 unless there is another significant economic shock.



GRAPH 14

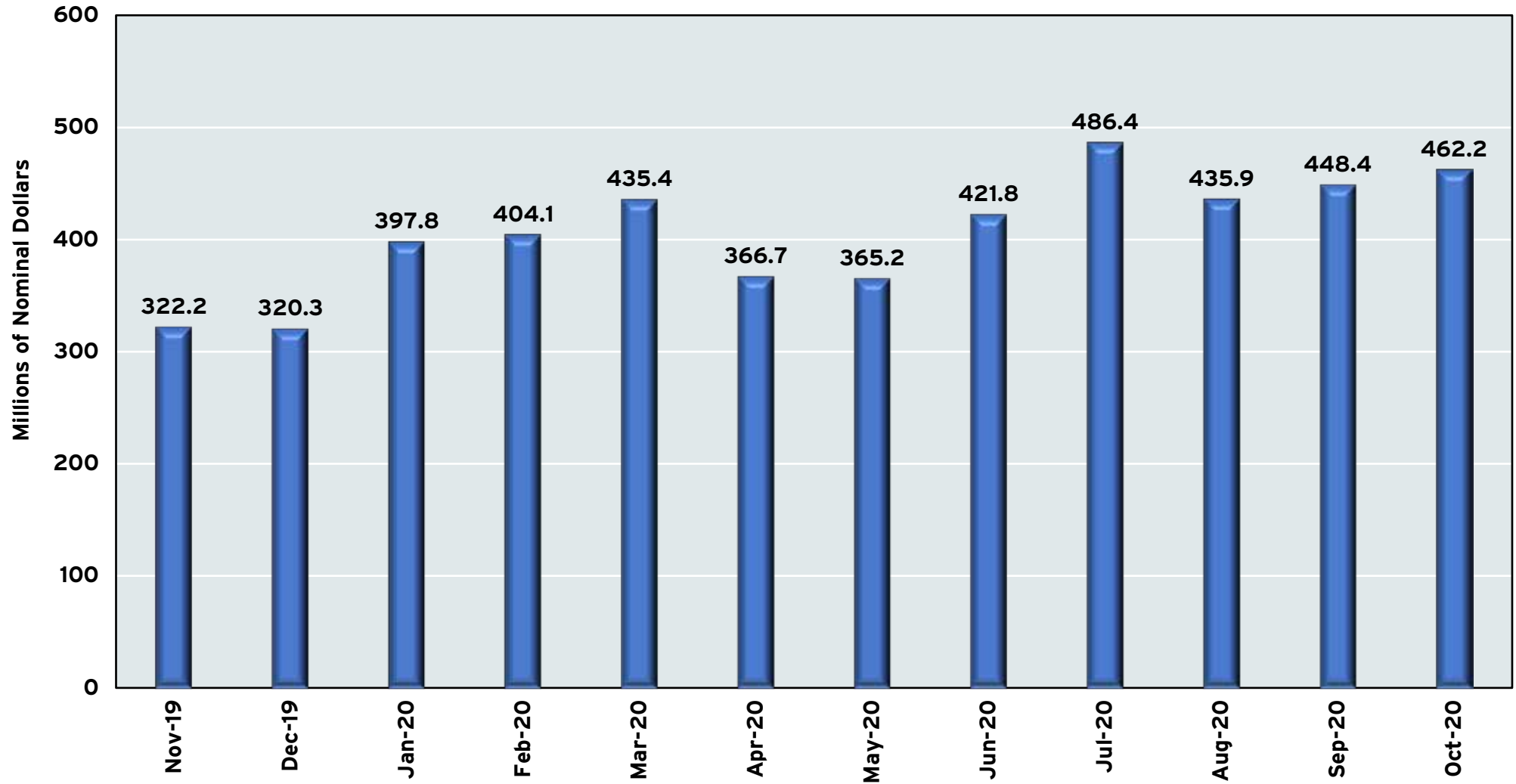
NUMBER OF ONE-UNIT SINGLE-FAMILY RESIDENTIAL BUILDING PERMITS:
VIRGINIA, JANUARY 2019 TO OCTOBER 2020



Source: U.S. Census Bureau, New Private Housing Units Authorized by Building Permits: 1-Unit Structures for Virginia [VABP1FH], retrieved from FRED, Federal Reserve Bank of St. Louis. Data are not seasonally adjusted.

GRAPH 15

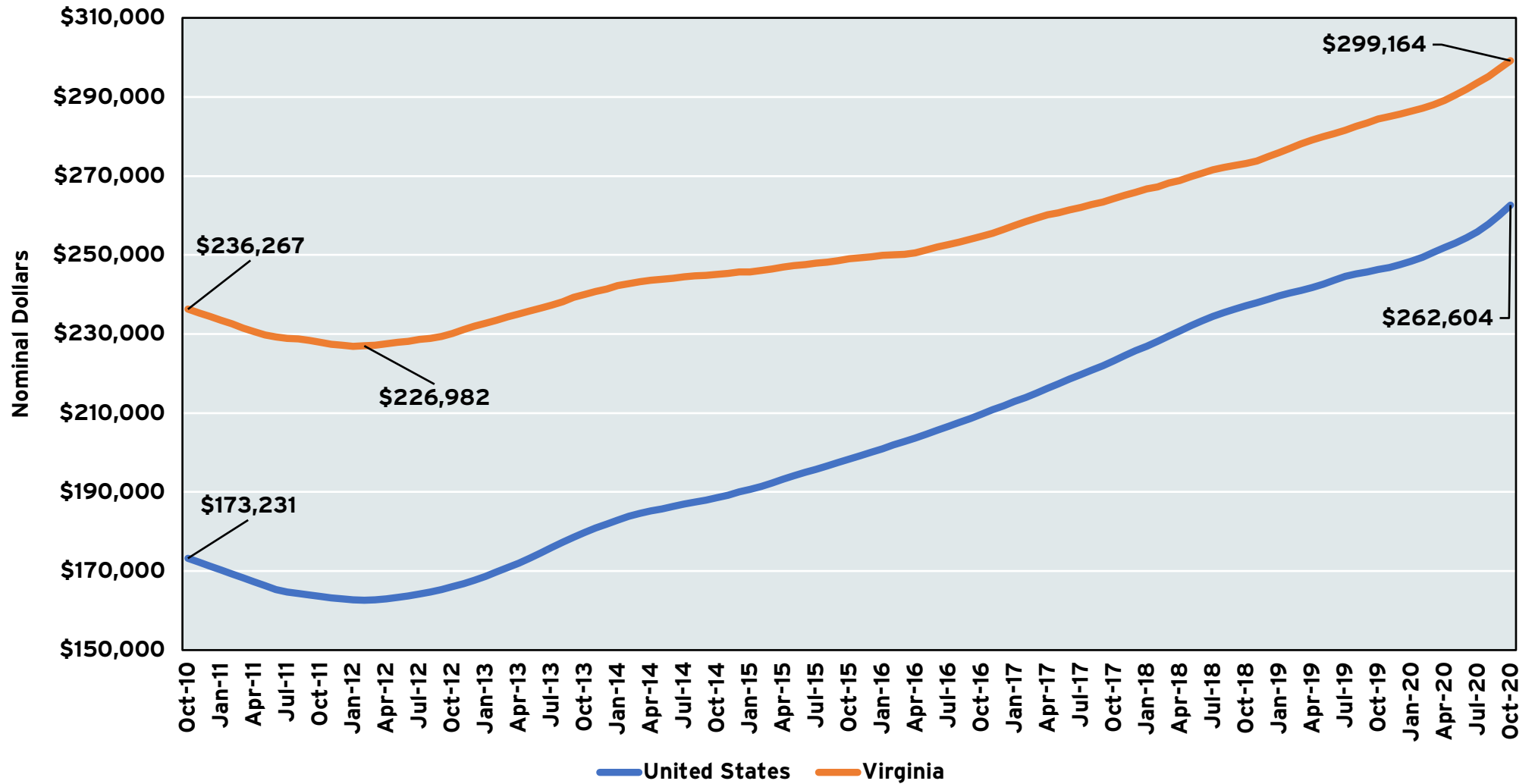
**VALUE OF SINGLE-FAMILY BUILDING PERMITS:
VIRGINIA, NOVEMBER 2019 TO OCTOBER 2020**



Sources: U.S. Census Bureau and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. New Privately-Owned Housing Units Authorized Valuation, 1-unit structures. Valuation in current month.

GRAPH 16

ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES:
UNITED STATES AND VIRGINIA, OCTOBER 2010 TO OCTOBER 2020



Sources: Zillow (2020) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Zillow Home Value Index (ZHVI) for single-family residence.

COVID-19's Unequal Burden

Both in terms of the recession and the virus itself, COVID-19 has had a disproportionate impact on the Black or African American population. In 2019, the U.S. Census Bureau estimated that people who identified as Black or African American comprised 12.5% of the U.S. population. By Nov. 28, 2020, the CDC, using death certificate data, estimated that Black or African American residents accounted for nearly 18.7% of COVID-19 deaths in the nation. People who identified as Black or African American accounted for 19.1% of the Commonwealth's population in 2019. At the end of November 2020, Black or African American residents comprised 27.0% of COVID-19 deaths in Virginia (Graph 17).⁸

At the end of February 2020, the headline unemployment rate had declined significantly from the highs observed after the Great Recession. The Black or African American unemployment rate was at 6.2%, while the Hispanic or Latino unemployment rate was at 4.8% (Graph 18).

With the emergence of the pandemic, unemployment rates increased for all the racial groups, reaching double-digit highs in April and May. The Hispanic or Latino unemployment rate peaked at 18.5% in April, while the Black or African American rate peaked at 16.6% in May 2020. Since then, we have observed a marked recovery in unemployment rates. We must caveat this observation on the fact that the civilian labor force is smaller, so the headline unemployment rates are biased downward. Even so, Black or African American unemployment is twice that of whites and approximately 1.5 percentage points higher than that of Hispanics or Latinos.

Not only have layoffs disproportionately fallen on Black or African American and Hispanic or Latino workers, but these workers also exited the labor force at a greater rate compared to white workers. As illustrated in Graph 19, from February 2020 to November 2020, the labor force participation rate for white workers fell by 1.5 percentage points. For Black or African American and Hispanic or Latino workers, the labor force participation rate declined approximately 2.2 and 2.3 percentage

points, respectively, over the same period. Even small differences in labor force participation have significant impacts at the national level.

In February 2020, there were approximately 73.8 million whites, 13.3 million Blacks or African Americans, and almost 14 million Hispanics or Latinos who were characterized as not in the labor force. By November 2020, even with the partial recovery in labor markets, an additional 3.8 million whites, 1 million Blacks or African Americans, and 1.4 million Hispanics or Latinos were not in the labor force. While those not in the labor force increased by 5.2% for whites, it increased by 8.5% for Blacks or African Americans, and 10.3% for Hispanics or Latinos.

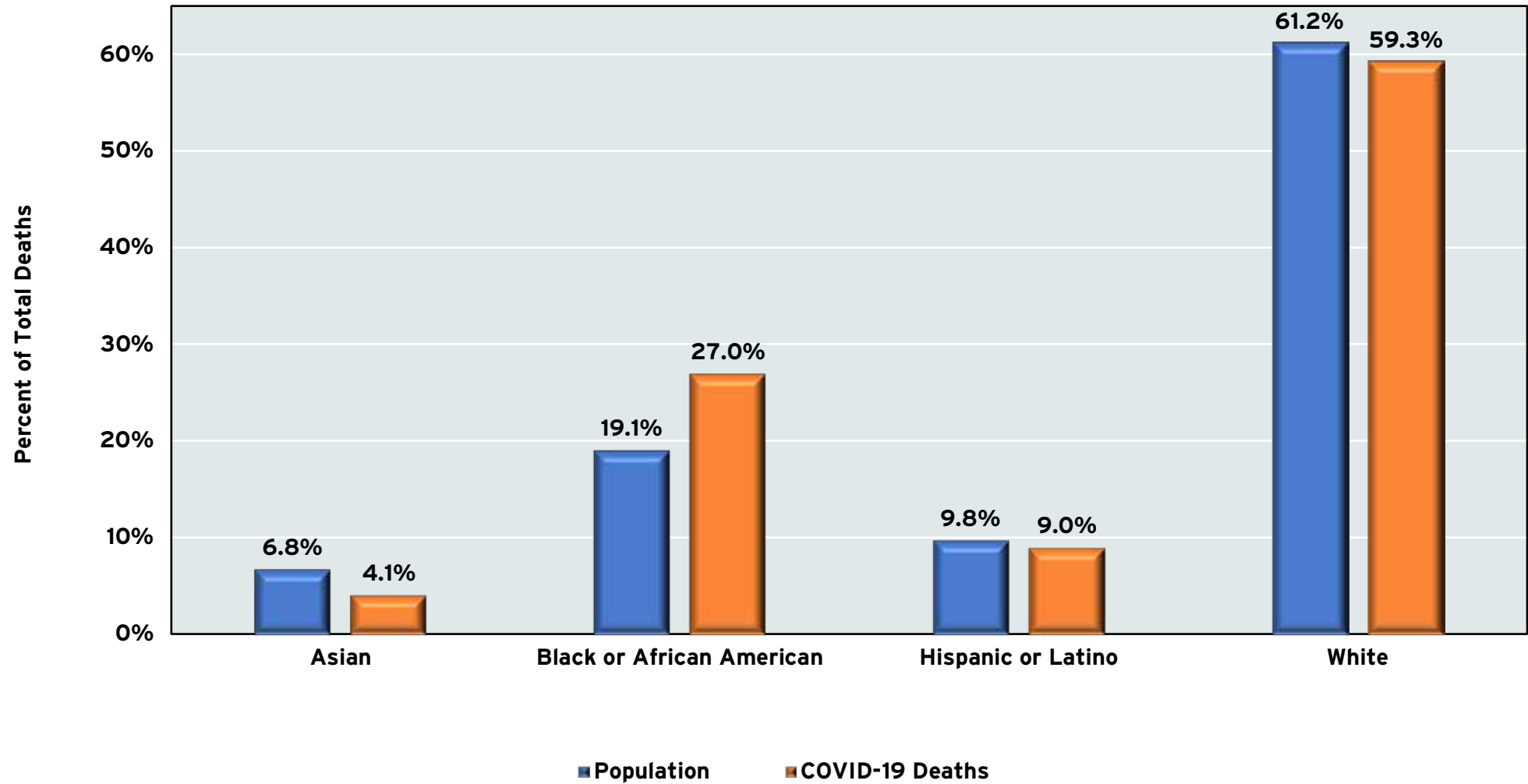
The disproportionate impact of the COVID-19 recession is also apparent in the Commonwealth. Table 4 presents the distribution of continuing unemployment claims in October 2019 and 2020 across different demographic categories. Blacks or African Americans comprised 39.1% of all continuing claims for unemployment insurance in October 2020, over two times higher than their share of the population.

If we examine continuing unemployment claims by gender, it appears that women have borne a more significant share of continuing unemployment in Virginia. Women comprised 50.8% of the Virginia population in 2019. In October 2019, 50.8% of continuing unemployment claims were women. In October 2020, women accounted for 54.3% of all continuing claims for unemployment insurance. One possible explanation for the unequal impact on women is their overrepresentation in the sectors (accommodation and food services, retail trade, health care and social assistance) most affected by COVID-19 and associated social distancing measures. It stands to reason that women, being more adversely impacted by unemployment and bearing a greater share of the responsibilities for child care, would be more likely to exit the labor force than men in 2020.

⁸ We use the 2019 Population Estimates from the U.S. Census Bureau and the provisional death certificate data from the CDC to make these estimates.

GRAPH 17

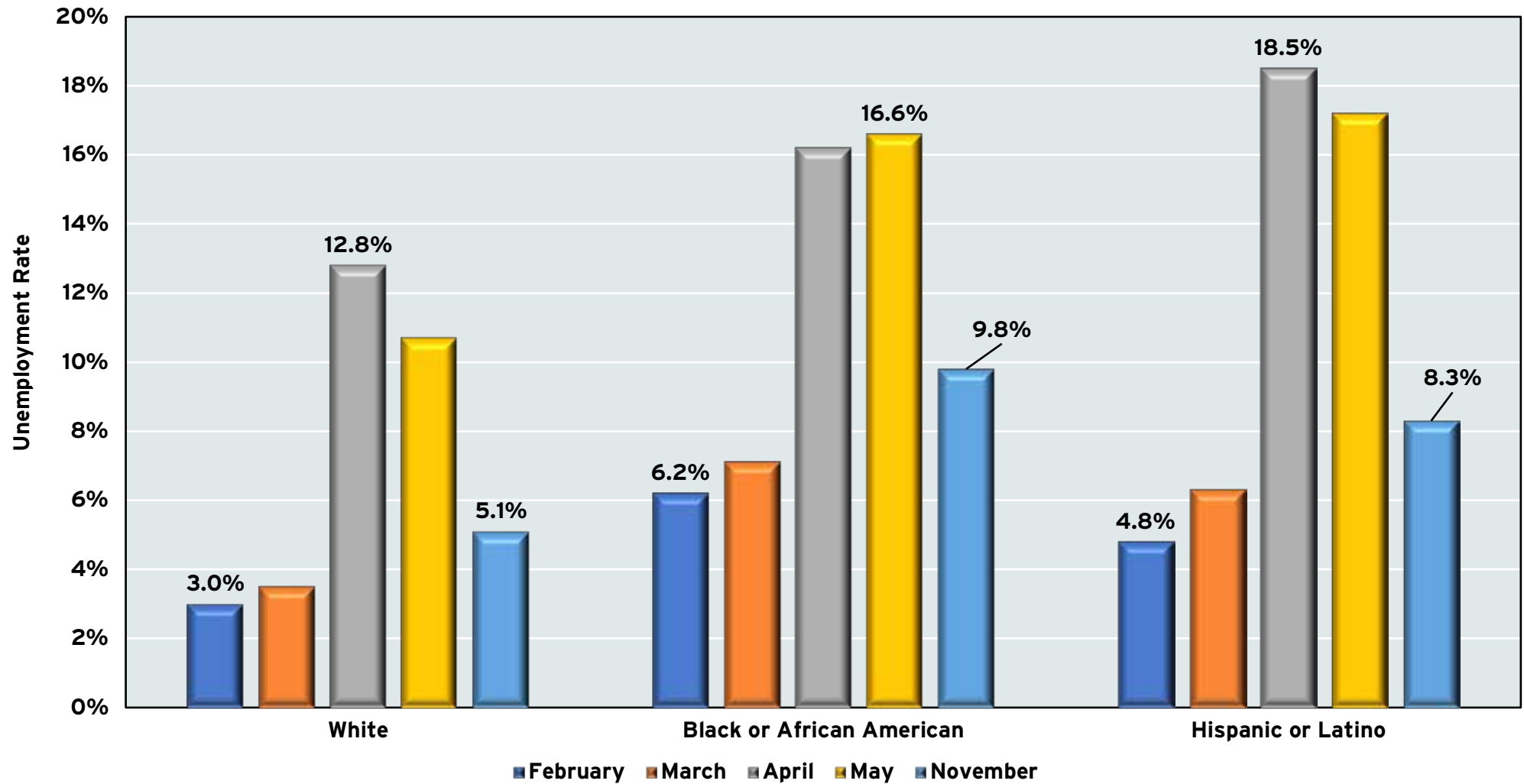
**SARS-COV-2 (COVID-19) DEATHS BY RACE:
VIRGINIA, FEB. 1, 2020 TO NOV. 28, 2020**



Source: Centers for Disease Control and Prevention, Provisional Death Counts by Race, through Nov. 28, 2020

GRAPH 18

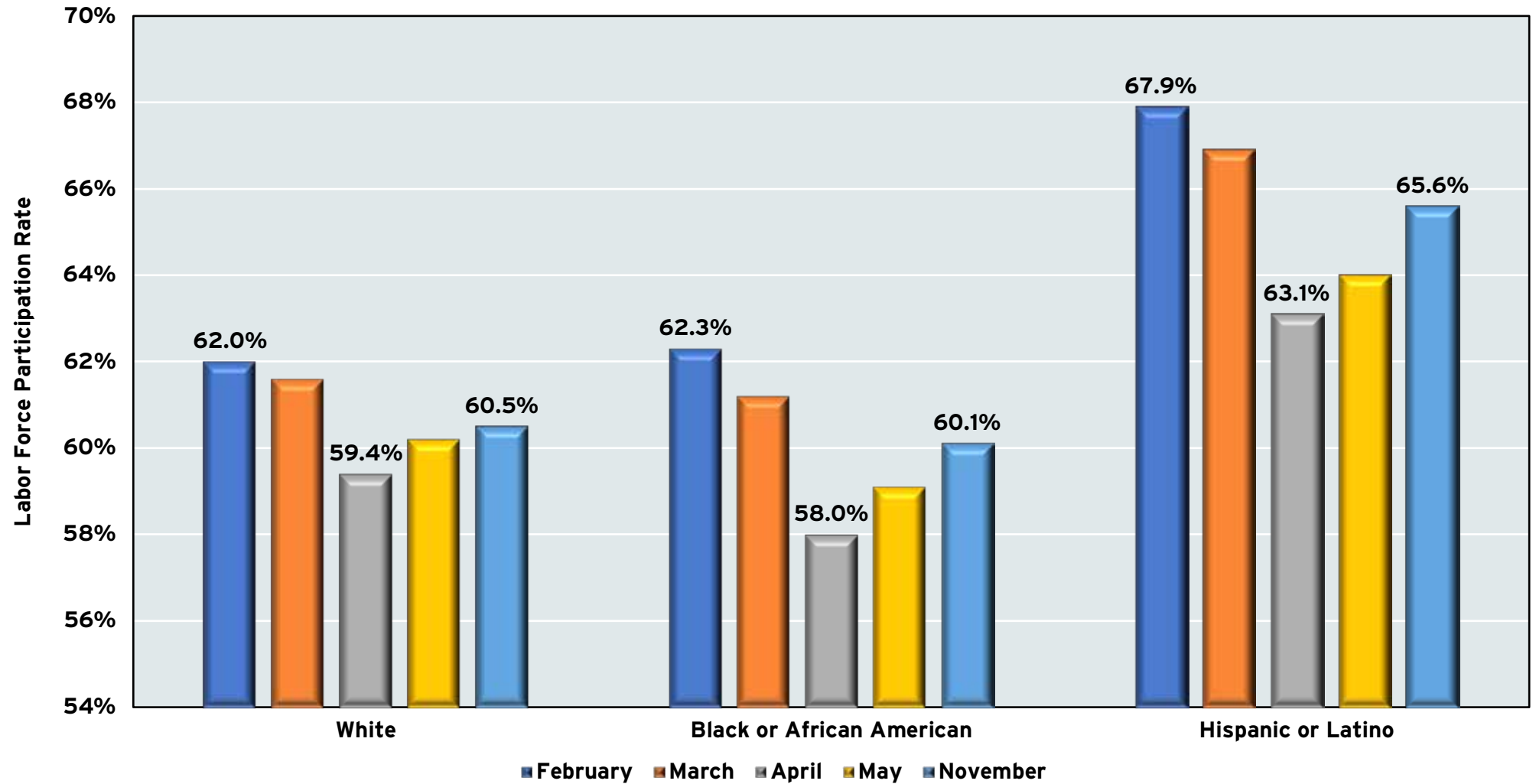
**UNEMPLOYMENT RATE BY RACE AND ETHNICITY:
UNITED STATES, FEBRUARY 2020 TO NOVEMBER 2020**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 19

**LABOR FORCE PARTICIPATION RATE BY RACE:
UNITED STATES, FEBRUARY 2020 TO NOVEMBER 2020**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. Civilian labor force is 16 years and older.

TABLE 4

**CONTINUING CLAIMS FOR UNEMPLOYMENT INSURANCE BY SELECTED DEMOGRAPHICS:
VIRGINIA, OCTOBER 2019 AND OCTOBER 2020**

| Demographic Category | Percent of the Population in 2019 | October 2019 Continuing Claims | October 2020 Continuing Claims | Percent of October 2020 Continuing Claims |
|-----------------------------------|-----------------------------------|--------------------------------|--------------------------------|---|
| RACE/ETHNICITY | | | | |
| White | 61.2% | 9,557 | 55,165 | 43.7% |
| Black or African American | 19.1% | 7,434 | 51,524 | 40.8% |
| American Indian and Alaska Native | 0.3% | 94 | 602 | 0.5% |
| Asian | 6.8% | 517 | 7,476 | 5.9% |
| Hispanic or Latino | 9.8% | 168 | 613 | 0.5% |
| Other Races | 2.8% | 1,328 | 10,945 | 8.7% |
| AGE | | | | |
| Under 22 years | 7.8% | 234 | 6,661 | 5.3% |
| 22 to 24 years | 4.0% | 537 | 8,423 | 6.7% |
| 25 to 34 years | 13.9% | 4,001 | 33,810 | 26.8% |
| 35 to 44 years | 13.0% | 4,448 | 27,042 | 21.4% |
| 45 to 54 years | 12.9% | 4,678 | 22,367 | 17.7% |
| 55 to 64 years | 13.1% | 4,194 | 19,529 | 15.5% |
| 65 years and over | 15.9% | 1,006 | 8,493 | 6.7% |
| GENDER | | | | |
| Male | 49.2% | 9,676 | 57,791 | 45.7% |
| Female | 50.8% | 9,422 | 68,534 | 54.3% |

Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Continuing claims for October cover 100% of total continuing claims. U.S. Census Bureau (2019), Sex by Age American Community Survey 1-year estimates.

Signs Of Anxiety And Depression

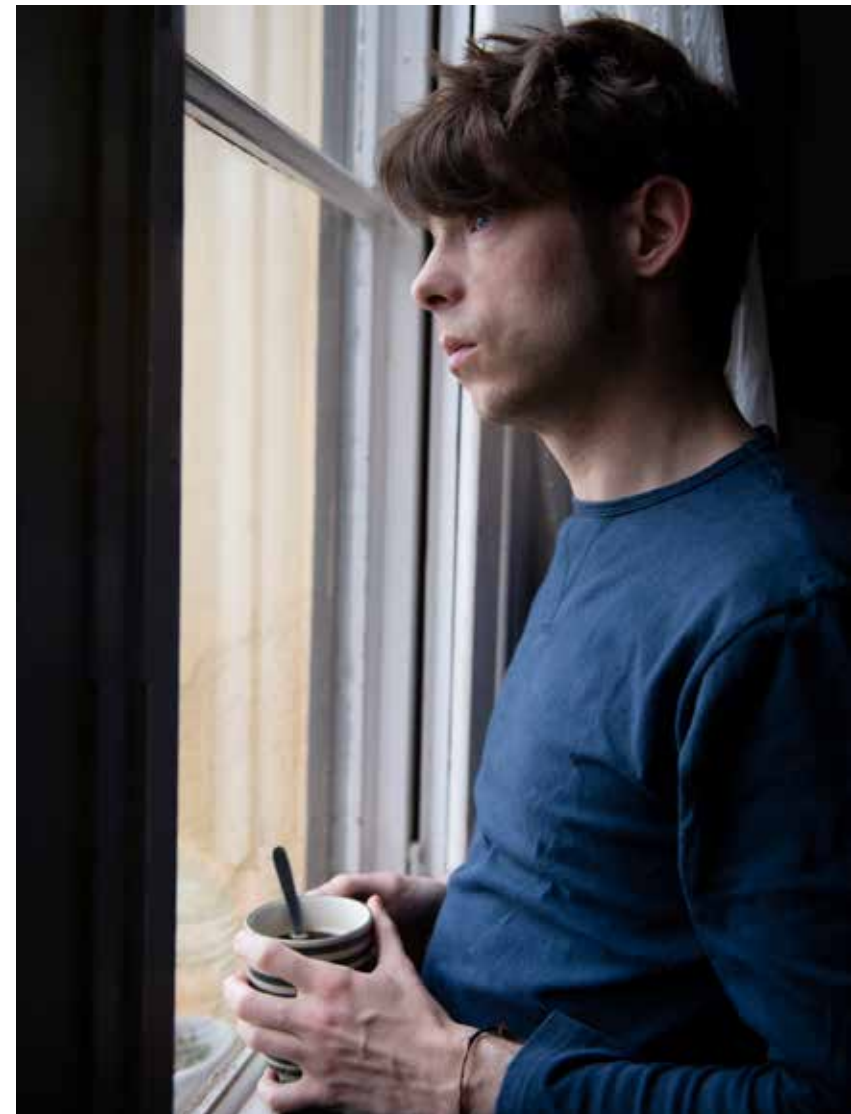
In response to the economic and social turmoil caused by the COVID-19 pandemic, the U.S. Census Bureau launched two emergency surveys in the spring of 2020. The Household Pulse Survey tracked the impact of the pandemic on households, and included questions about finances and mental health. In 2019, the U.S. Census estimated that approximately 11% of American adults 18 and older exhibited signs of anxiety or depression.

The U.S. Census Household Pulse Survey provides estimates of the percentage of adults who report symptoms of anxiety or depression that have been shown to be associated with diagnoses of generalized anxiety disorder or major depressive disorder. The data illustrate a troubling deterioration in the mental health of American adults (Graph 20). At the height of the racial justice protests in the summer of 2020, almost 41% of respondents reported signs of anxiety or depression. While there was some moderation in late summer and early fall, the presidential election and increasing COVID infections undoubtedly contributed to 41.4% of adults reporting signs of anxiety or depression for the week of Nov. 9, 2020. Virginia has fared somewhat better, but the latest data from the U.S. Census report that 36.7% of Virginians exhibited signs of anxiety or depression in November 2020 (Graph 21).

As we discuss late in this report, the toll of the pandemic on mental health is a challenge that is likely to echo across the decade. Youth mental health has also deteriorated as schools have closed, social events have disappeared and athletic events are few and far between. The burdens of the pandemic are likely to be with us for years to come.

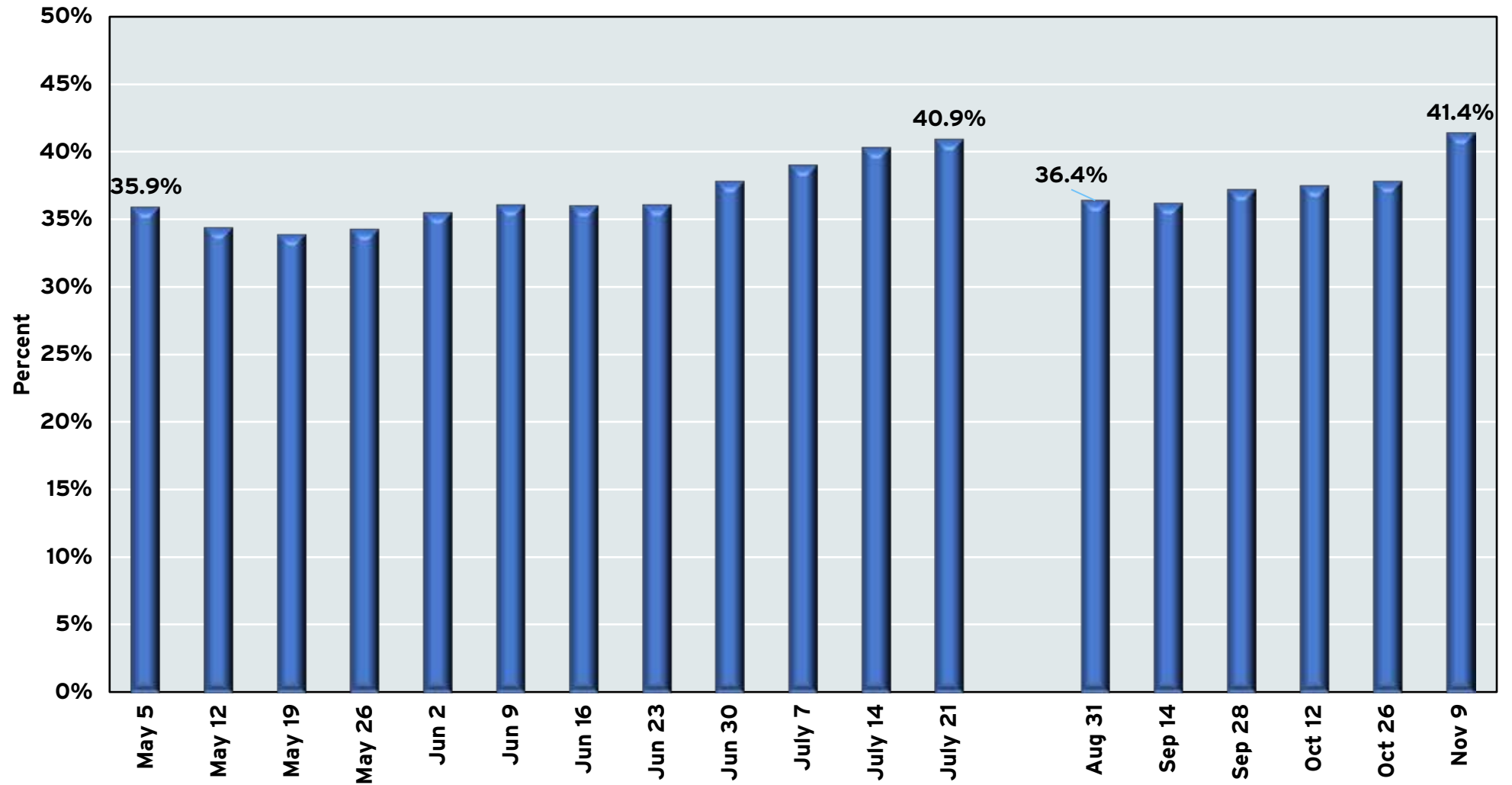
Hispanic or Latino and Black or African American adults were more likely to exhibit signs of anxiety or depression than their white or Asian counterparts (Graph 22). Adults reported increasing stress in the summer of 2020, coinciding with protests of police brutality. While there appears to have been some respite in late summer, the latest data show record levels of anxiety or depression among Hispanic or Latino and Black or African

American households. In November, 48% of Hispanic or Latino adults and 45% of Black or African American adults reported signs of anxiety or depression. Higher unemployment, social unrest and a pandemic have come together to place extraordinary stress on adults in America. We must recognize the burdens of this extraordinary time are not equally borne by people of the same race or income. If anything, the pandemic has thrown the fractures of our society into sharp relief.



GRAPH 20

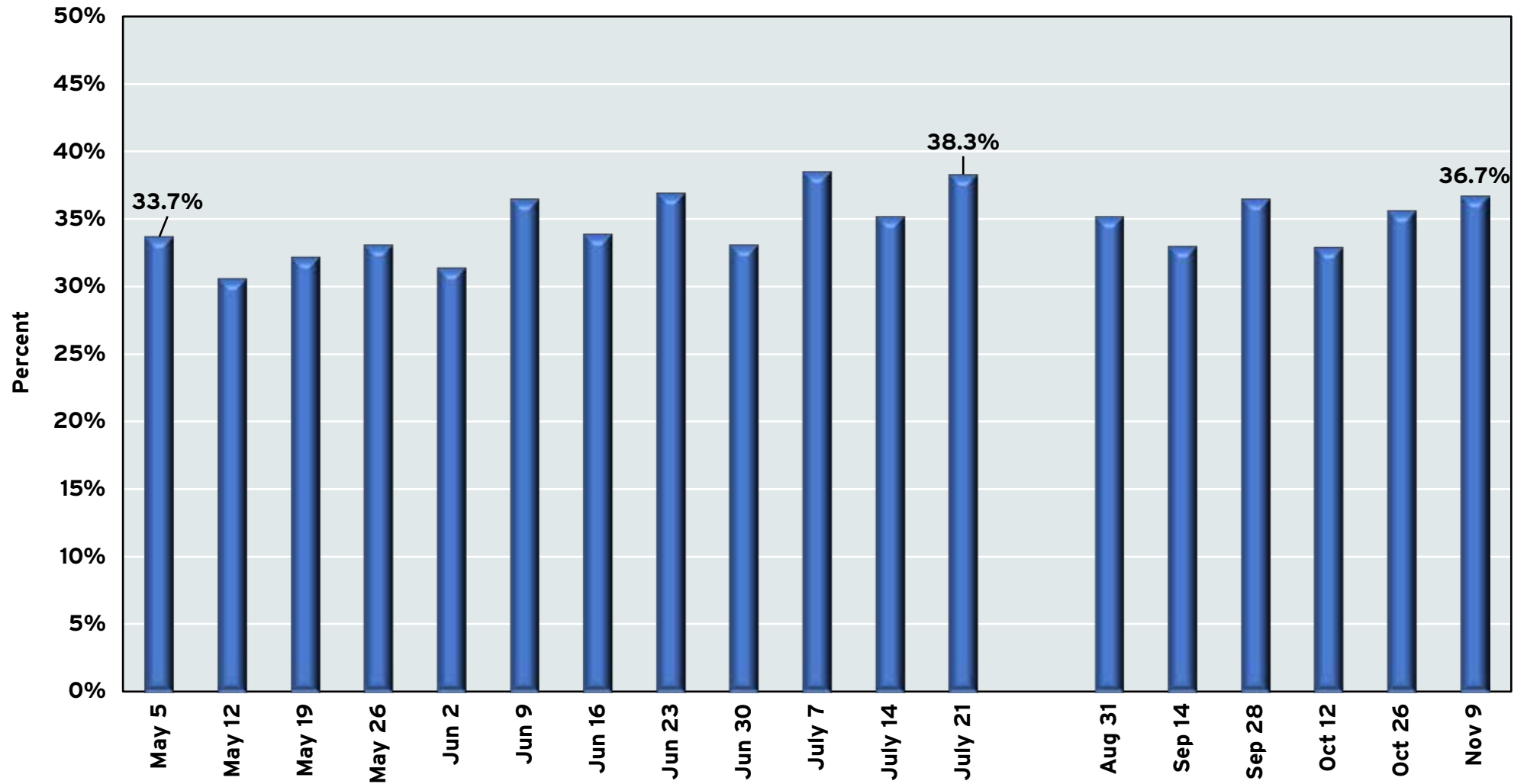
**INDICATORS OF ANXIETY OR DEPRESSION IN THE LAST WEEK:
UNITED STATES, MAY 5, 2020 TO NOV. 9, 2020**



Sources: U.S. Census Bureau Household Pulse Survey and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Responses indicated symptoms of either anxiety or depression. During January-June 2019, 11% of adults 18 and older had symptoms of anxiety disorder or depressive disorder. Phase 2 responses started the week of Aug. 31, 2020. Phase 3 responses started the week of Nov. 9, 2020.

GRAPH 21

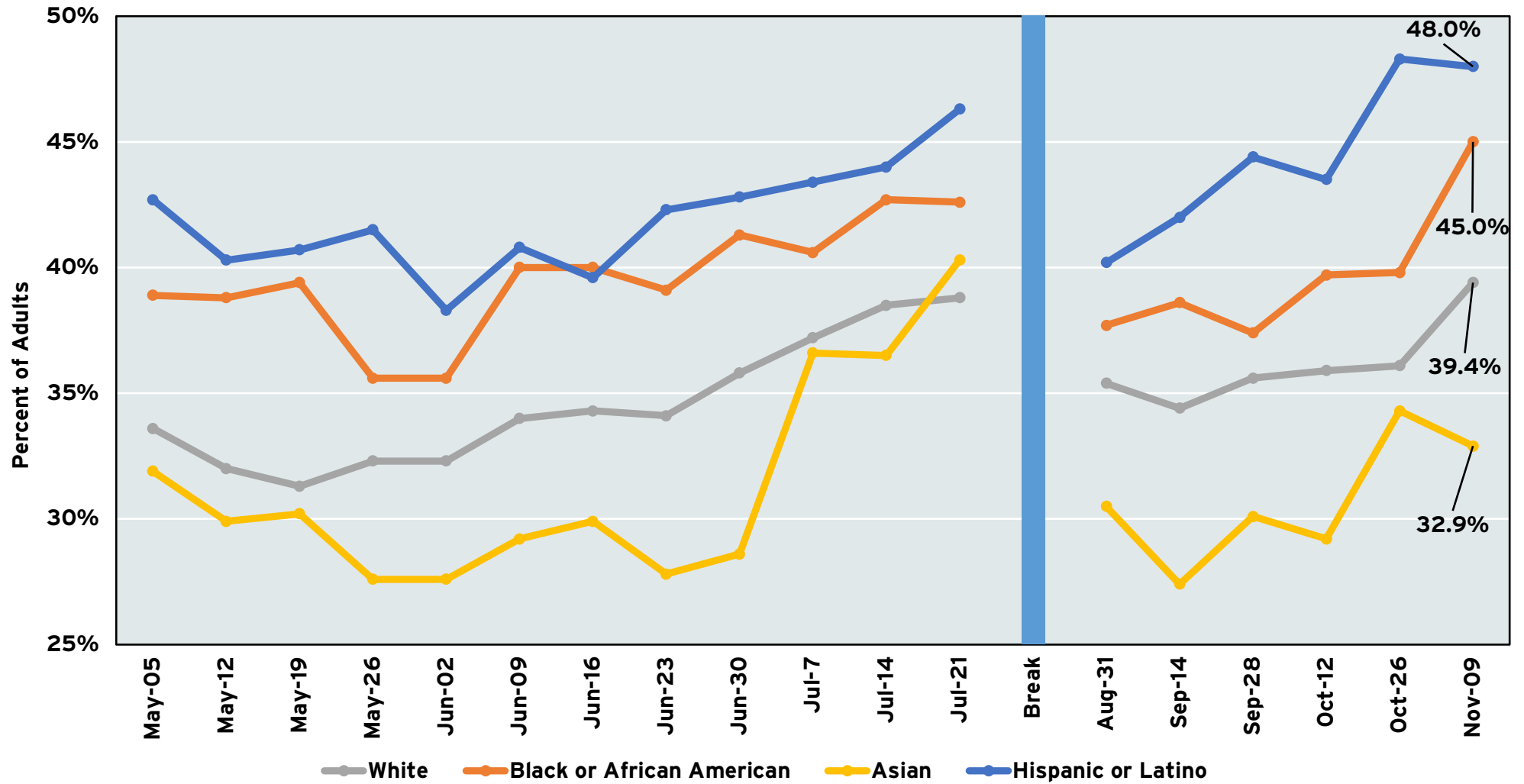
INDICATORS OF ANXIETY OR DEPRESSION IN THE LAST WEEK:
VIRGINIA, MAY 5, 2020 TO NOV. 9, 2020



Sources: U.S. Census Bureau Household Pulse Survey and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Responses indicated symptoms of either anxiety or depression. During January-June 2019, 11% of adults 18 and older had symptoms of anxiety disorder or depressive disorder. Phase 2 responses started the week of Aug. 31, 2020. Phase 3 responses started the week of Nov. 9, 2020.

GRAPH 22

INDICATORS OF ANXIETY OR DEPRESSION BY RACE:
UNITED STATES, MAY 5, 2020 TO NOV. 9, 2020



Sources: U.S. Census Bureau and the National Center for Health Statistics, Household Pulse Survey, Mental Health, available at: <https://www.cdc.gov/nchs/covid19/pulse/mental-health.html>

Final Thoughts

The COVID-19 pandemic and recession will test the mettle of state and nation like no other crisis in recent memory. We already have observed historic levels of initial unemployment claims and continuing unemployment claims. Permanent unemployment is rising faster than during the Great Recession, suggesting that a recovery may take years, not months. Even the relatively quick approval of a safe and effective vaccine in late 2020 would not bring about the necessary improvements in acquired immunity for economic and social life to return to normal until late 2021.

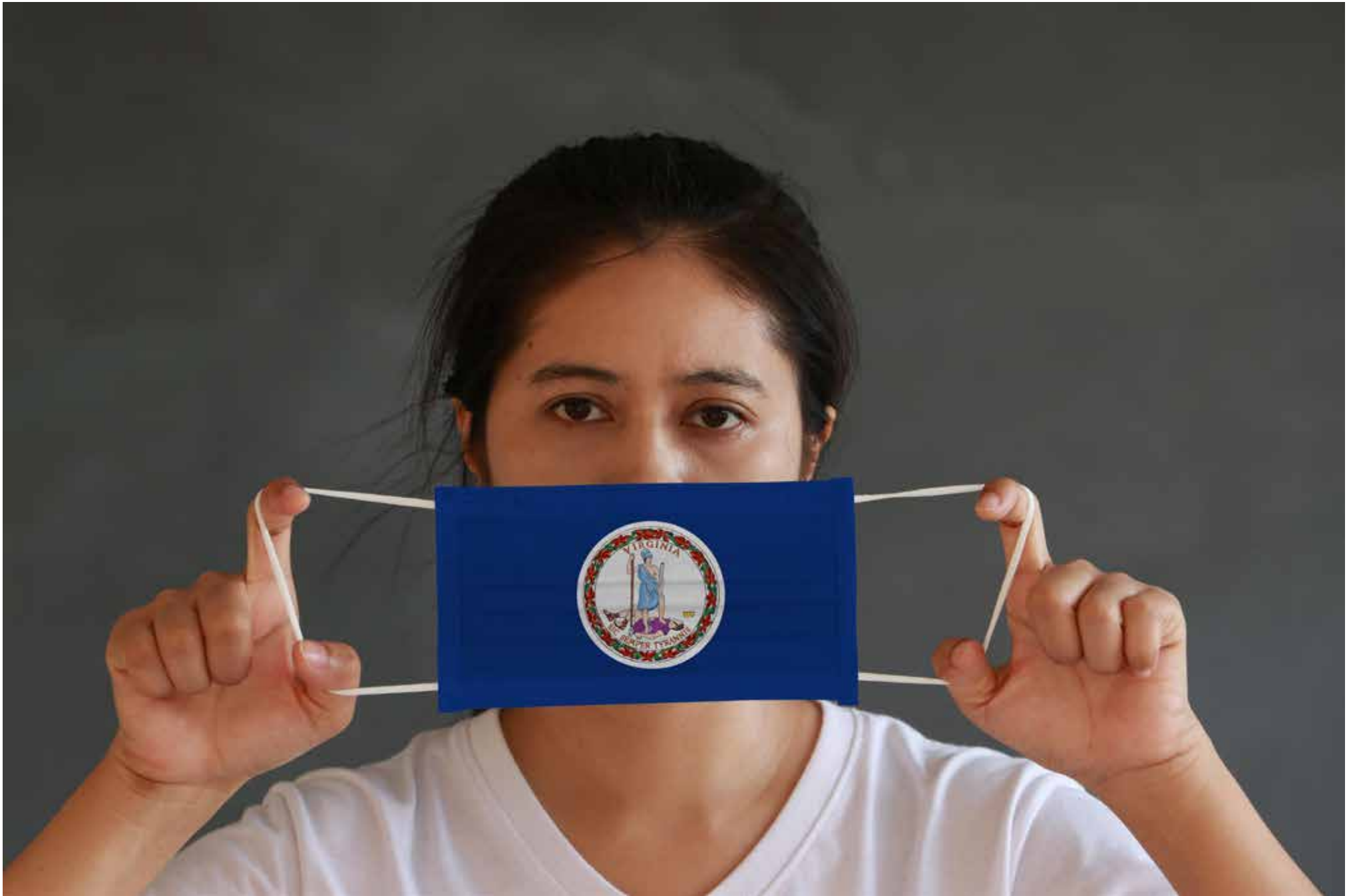
The combination of the pandemic and recession has illuminated the racial inequities in Virginia and the United States. Hispanic or Latino and Black or African American individuals are more likely to become infected, hospitalized and die from COVID-19 relative to their share of the population. Inequalities in household wealth have meant that Hispanic and Black or African American households have been less able, on average, to cope with the economic shock of the pandemic. Emerging evidence also suggests that Hispanic and Black or African American schoolchildren are more adversely impacted by remote schooling than their white or Asian counterparts.⁹ To improve opportunities for all Virginians, we must confront these facts with open, frank and transparent discussion.

It took the United States and Virginia more than 70 months to recover all the jobs lost during the Great Recession. Undoubtedly, the COVID-19 economic shock has exceeded that of the Great Recession. The lackluster federal response to the pandemic has only deepened the economic shock and led to significant policy heterogeneity across states. We must temper our expectations and accept that a recovery will be neither quick nor smooth. In all likelihood, we should not expect a full recovery in jobs and economic activity until at least 2022, although we would be happy to be proven wrong on this point. More critically, we must reimagine what recovery will look like in a changed world. How can Virginia adapt and

thrive in a new normal that, for the time being, is characterized by masks, temperature checks and social distancing?

In an era of increased political polarization, Virginians must set aside their differences for the Commonwealth to succeed in its goal of ensuring economic stability for all its citizens. Our traditional recommendations continue to hold: invest wisely in K-12 education, improve access to broadband and other forms of infrastructure across the Commonwealth and reform the tax system to meet the needs of the new decade. We must also be willing to examine past policies that have disproportionately harmed the economic livelihoods of Virginians on the basis of race. Improving the homeownership rates of Black or African American and Hispanic or Latino Virginians, for example, can help address the impact of zoning decisions made in decades past and provides an avenue for the accumulation of household wealth. Frankly discussing why Black or African American Virginians were more likely to die from COVID-19 can lead to policies to address persistent health inequalities across the Commonwealth. Finding solutions to these problems is not only the right thing to do, but also economically sound, as there is no economic rationale for public policy to discriminate on the basis of race. In crisis, there is opportunity. Perhaps now we can agree to work on reducing these inequities in order to improve the lives of all who call the Commonwealth home.

⁹ <https://www.nytimes.com/2020/06/05/us/coronavirus-education-lost-learning.html>.



THE WAY WE WERE: 2010-2019

*If you do not change direction, you may end
up where you are heading.*

- Laozi, fifth-century B.C. Chinese
philosopher



The immediacy of the “now” often triumphs over our ability to reflect on the past. In a 24-hour news cycle, there are constant demands on our attention. This year has been no exception. The COVID-19 pandemic has challenged us socially and economically and its impacts are likely to reverberate over the coming decade. Even amid these turbulent times, it is important to reflect on what went right, what did not turn out as expected and what lessons were learned over the previous decade.

The Commonwealth of Virginia has much to offer, including magnificent landscapes, a well-educated workforce and a culturally diverse population. The 12th-most populous state in the nation, Virginia has a rich history, plays an important role in the nation’s national security and was ranked as America’s top state for business in 2019. The last decade, however, might be characterized as one where the Commonwealth faltered and then picked up the pace. The twin hammers of the Great Recession and federal budget sequestration fell heavily on the state as job creation and economic growth lagged the U.S. and some neighboring states. As the decade ended, however, Virginia’s economic performance improved and its prospects for entering the new decade appeared bright.

Not all who wander are lost, as the saying goes. Although Virginia may have struggled in the first half of the decade, it found its proverbial

economic footing near the end. Last year marked the state’s fifth consecutive year of real economic growth. While the COVID-19 pandemic will likely lead to an economic contraction at the close of 2020, Virginia’s measured and science-based approach to deal with it has resulted in lower coronavirus infections and deaths per capita than many other states. The question is now whether Virginia can continue to recover economically, building upon the experience of the previous decade.

The purpose of this chapter is simple: to reflect on the previous decade and consider what steps we can take to foster growth in the coming decade. We strive to answer two important questions: Where did Virginia fall short and what went right for the Commonwealth? While this chapter is by no means exhaustive, we do offer critical insight on how to promote growth without sacrificing the characteristics that make Virginia distinctive.

A Slow Start, A Faster Finish

By looking back, we can assess what went right and wrong, and what defied our expectations. Our inaugural State of the Commonwealth Report in 2015 reflected on Virginia’s relatively poor performance in the first half of the last decade and concluded that the Commonwealth’s long-term growth prospects were imperiled by a reliance on defense spending, a lack of private-sector job creation and uneven economic growth across its metropolitan areas. These observations are as applicable today as they were then.

Virginia’s entrance into the previous decade was hardly auspicious. During the Great Recession of 2008-2009, our growth in real (inflation-adjusted) gross domestic product (GDP) was -0.3% in 2008 and -0.1% in 2009. Yet, real GDP growth for the Commonwealth increased to 2.7% in 2010, signaling to some that the worst of the recession was in the rearview mirror. Reality, however, has a way of dashing wishful expectations.

As illustrated in Table 1, real GDP growth slowed in Virginia from 2011 to 2013 and the economy contracted slightly in 2014, owing to the lingering effects of the Great Recession and budget sequestration. While growth resumed in 2015, it was relatively weak when compared to previous periods of economic expansion. As discretionary federal spending, especially that by the Department of Defense (DOD), increased in the latter half of the decade, Virginia’s economy began to pick up the pace.

TABLE 1
NOMINAL AND REAL (INFLATION-ADJUSTED) GROSS DOMESTIC PRODUCT: VIRGINIA, 2010-2019
(IN MILLIONS OF DOLLARS)

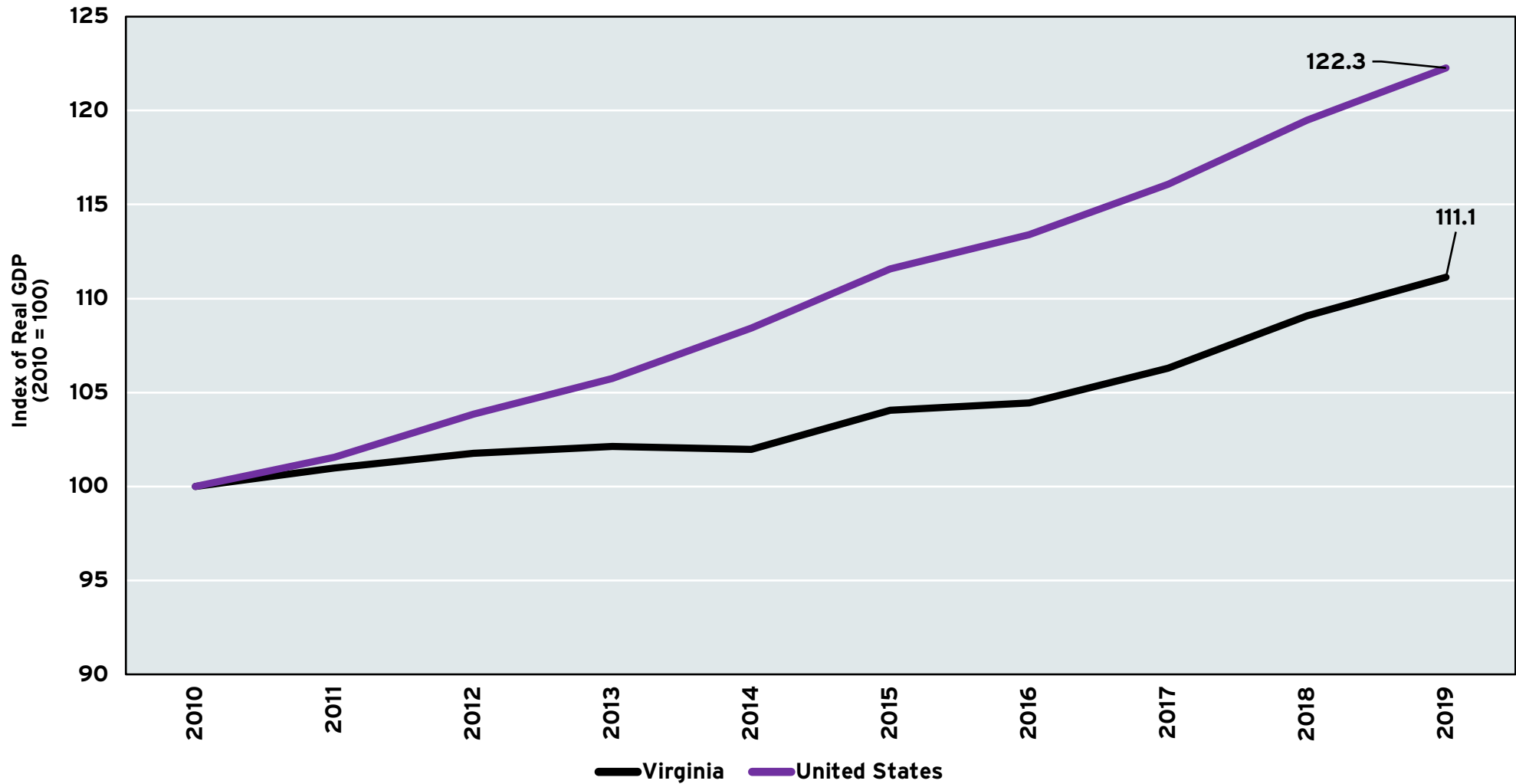
| | Nominal GDP | Real GDP (Base Year - 2012) | Year-Over-Year Change in Real GDP |
|------|-------------|-----------------------------|-----------------------------------|
| 2010 | \$422,902 | \$437,268 | 2.7% |
| 2011 | \$432,393 | \$441,609 | 1.0% |
| 2012 | \$444,950 | \$444,950 | 0.8% |
| 2013 | \$455,070 | \$446,560 | 0.4% |
| 2014 | \$463,478 | \$445,869 | -0.2% |
| 2015 | \$484,217 | \$454,953 | 2.0% |
| 2016 | \$493,878 | \$456,676 | 0.4% |
| 2017 | \$509,373 | \$464,793 | 1.8% |
| 2018 | \$532,893 | \$477,006 | 2.6% |
| 2019 | \$554,211 | \$485,998 | 1.9% |

Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University

Compared to the United States, however, Virginia’s economic performance over the decade could only be charitably characterized as lackluster. From 2010 to 2019, the U.S. economy grew by approximately 22.3%, double that of the Commonwealth (Graph 1). For every dollar of additional output created in Virginia, the national economy added about two dollars on average. How did this happen?

GRAPH 1

**INDEX OF REAL GROSS DOMESTIC PRODUCT:
UNITED STATES AND VIRGINIA, 2010-2019**



Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data on GDP incorporate the latest BEA revisions in December 2019. Index is equal to 100 in 2010.

Uneven Performance At The Metro Level

Virginia’s economic malaise during the first half of the previous decade can be seen in the data on economic growth at the metropolitan statistical area (MSA) level (Table 2). With the exception of the Blacksburg-Christiansburg and Richmond metro areas, real GDP growth slowed across Virginia’s MSAs. From 2001 to 2009, 7 out of the 10 Virginia metro areas grew faster on average than the nation. From 2010 to 2019, none of Virginia’s metros grew faster than the United States.

Given that three metropolitan areas (Hampton Roads, Northern Virginia and Richmond) account for about 75% of Virginia’s economic activity in a given year, the relatively slow growth rate in these metros acted as a drag on the state’s economy. Other metros did not fare well either. Three metro areas (Harrisonburg, Lynchburg and Staunton) contracted slightly over the decade. Growth in the Hampton Roads and Roanoke economies could only be characterized as anemic. Only the Richmond metro area grew faster than 2% over the decade, highlighting the relatively poor performance of Virginia’s metro areas over the recent decade. If there was any good news, it was that growth picked up near the end of the decade, although these gains were likely wiped out by the COVID-19 pandemic.

TABLE 2

AVERAGE ANNUAL GROWTH IN REAL GROSS DOMESTIC PRODUCT: UNITED STATES, VIRGINIA AND VIRGINIA METROPOLITAN STATISTICAL AREAS, 2001-2019

| Metropolitan Statistical Area | Average Growth 2001-2009 | Average Growth 2010-2019 |
|-------------------------------------|--------------------------|--------------------------|
| United States | 1.6% | 2.3% |
| Virginia | 2.3% | 1.2% |
| Blacksburg-Christiansburg | 1.3% | 1.3% |
| Charlottesville | 3.4% | 1.5% |
| Harrisonburg | -0.1% | -0.4% |
| Lynchburg | 1.9% | -0.2% |
| Richmond | 0.5% | 2.1% |
| Roanoke | 1.1% | 0.6% |
| Staunton-Waynesboro | 1.2% | -0.4% |
| Virginia Beach-Norfolk-Newport News | 1.9% | 0.6% |
| Washington-Arlington-Alexandria | 2.8% | 1.4% |
| Winchester | 1.9% | 1.2% |

Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Real GDP is in 2012 chained dollars. Annual growth rate is the compound annual growth rate (CAGR).

Per Capita Personal Income

Personal income captures individuals' earnings from wages, their own businesses, dividends, interest, rents and government benefits. Real personal income per capita provides a measure of the average, inflation-adjusted income for residents in a region. Typically, rising real income per capita is a signal of a thriving economy, where incomes are rising faster than increases in the population and inflation. On the other hand, stagnant or declining real income per capita is a sign that a region's economy is not growing fast enough. The challenge for a region is to foster economic conditions that attract new residents and businesses, spurring economic activity and increasing real income over time.

As illustrated in Graph 2, real personal income per capita in Virginia grew over the last decade, but not without some bumps along the road. Real income declined on a per capita basis from 2012 to 2013, in all likelihood due to federal budget sequestration. After this shock, real income had recovered by 2015, and ended the decade 12.7% higher than the beginning. Real personal income per capita in the Commonwealth remained higher than that of the nation, \$53,987 compared to \$44,689 in 2019. However, real income per capita rose faster in the nation (16.2%) than Virginia over the decade, illustrating how the higher rates of national growth translated into gains in personal income.

Table 3 presents real personal income per capita for Virginia's metropolitan areas. From 2010 to 2018, real personal income in the United States increased at an average annual rate of 1.7% compared to 1.3% for the Commonwealth. One metro area (Charlottesville) saw real personal income grow faster than the nation and two (Blacksburg-Christiansburg and Richmond) grew at the same rate as the nation. However, except for Richmond, these metro areas comprised a relatively small proportion of the Virginia economy when compared to Northern Virginia and Hampton Roads. The slower growth in the larger metros of Hampton Roads and Washington, D.C., acted as a brake on real income growth in Virginia.

TABLE 3

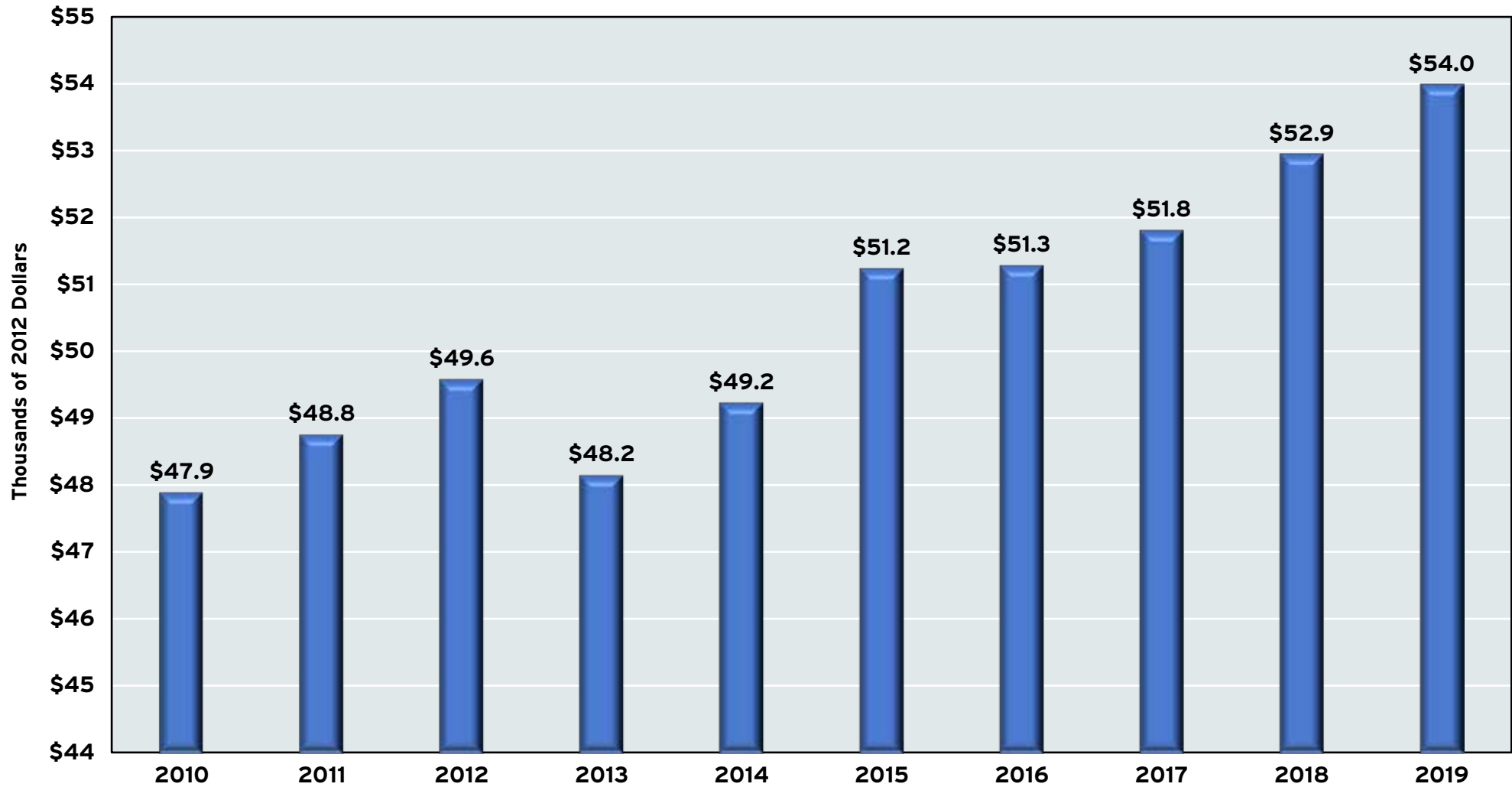
**AVERAGE ANNUAL GROWTH IN REAL PERSONAL INCOME:
UNITED STATES, VIRGINIA AND VIRGINIA METROPOLITAN
STATISTICAL AREAS, 2010-2019**

| Metropolitan Statistical Area | 2010 Personal Income | 2019 Personal Income | Average Annual Growth Rate |
|-------------------------------------|----------------------|----------------------|----------------------------|
| United States | \$38,451 | \$44,689 | 1.7% |
| Virginia | \$47,896 | \$53,575 | 1.3% |
| Blacksburg-Christiansburg | \$30,379 | \$35,488 | 1.7% |
| Charlottesville | \$48,529 | \$61,968 | 2.8% |
| Harrisonburg | \$32,261 | \$37,100 | 1.6% |
| Lynchburg | \$34,701 | \$37,058 | 0.7% |
| Richmond | \$45,200 | \$52,651 | 1.7% |
| Roanoke | \$39,715 | \$43,442 | 1.0% |
| Staunton | \$37,887 | \$41,003 | 0.9% |
| Virginia Beach-Norfolk-Newport News | \$42,602 | \$46,708 | 1.0% |
| Washington-Arlington-Alexandria | \$61,491 | \$66,801 | 0.9% |
| Winchester | \$38,529 | \$44,582 | 1.6% |

Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Real personal income is in 2012 dollars. Annual growth rate is the compound annual growth rate (CAGR).

GRAPH 2

REAL PERSONAL INCOME PER CAPITA: VIRGINIA, 2010-2019
(IN THOUSANDS OF 2012 DOLLARS)



Sources: Bureau of Economic Analysis, Personal Income Per Capita by Metropolitan Area, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Base year is 2012.

Median Household Income

Real personal income per capita is a measure of income relative to the population of an area. Real personal income may rise because all incomes are increasing, or it may rise because the top end of the income distribution is rising rapidly while other parts remain stagnant. We can examine median household income, which estimates the income of the “middle household,” if we arrange households from the poorest to the richest. If median household income is stagnant while average incomes are rising, then we may conclude that gains are limited to high-income earners rather than the entire population of a region.

According to the U.S. Census Bureau’s American Community Survey (ACS) 1-year estimates, median household income was higher in the Commonwealth (\$76,456) than the United States (\$65,712) in 2019 (Table 4). While the median household in Virginia earned more income than the median household nationally, there were also sharp differences in median income by race.

In 2019, Asian households’ median income was approximately 2.1 times higher than Black or African American households nationally and 2.0 times higher in the Commonwealth. White households’ median income was about 1.6 times higher than Black or African American households nationally and in the state. Median income for Hispanic or Latino households was 1.2 times higher than Black or African American households nationally and in the Commonwealth.

While it is difficult to point to a single factor for these differences in median household income, it should be clear that there are substantial differences by race. Differences in education and occupational choice can explain some, but not all, of the differences. However, we are left with the realization that educational differences can produce significant disparities in lifetime incomes and that not every child has the same access to a quality education in Virginia. In other words, it is more difficult for a child that is the product of a poor-performing school to succeed than it is for a child of a high-performing school.

TABLE 4

**MEDIAN HOUSEHOLD INCOME BY RACE AND ETHNICITY:
UNITED STATES AND VIRGINIA, 2019**

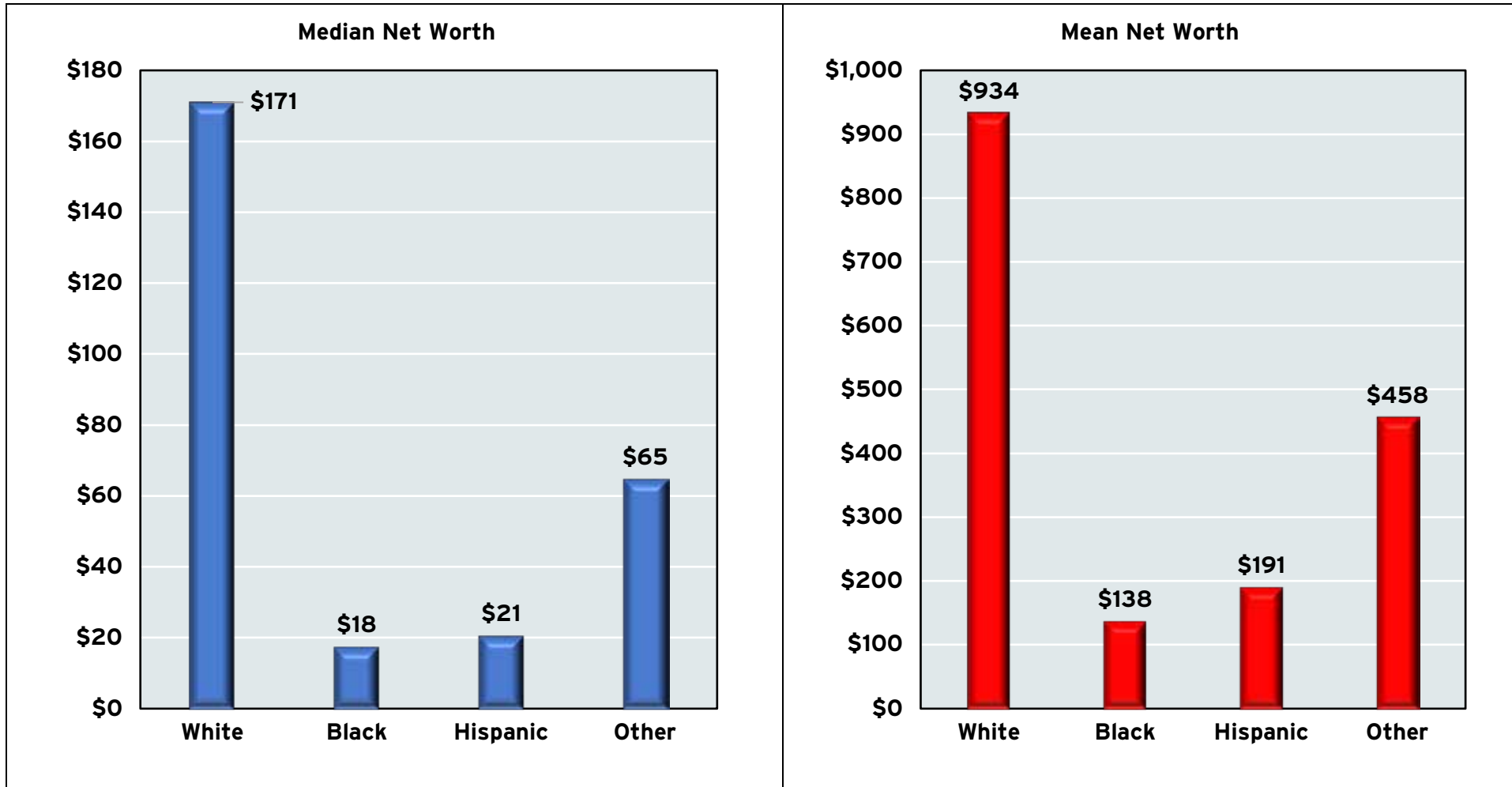
| Race | United States | Virginia |
|--------------------------------------|---------------|-----------|
| Asian | \$93,759 | \$109,876 |
| Black or African American | \$43,862 | \$53,896 |
| Hispanic or Latino | \$55,658 | \$69,220 |
| Native Hawaiian and Pacific Islander | \$66,464 | \$80,324 |
| White | \$69,823 | \$82,107 |
| Overall | \$65,712 | \$76,456 |

Sources: U.S. Census Bureau, 2019 ACS 1-year estimates subject tables, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. In 2019 inflation-adjusted dollars.

National-level data also point to significant disparities in household wealth. The latest Survey of Consumer Finances from the Federal Reserve System’s Board of Governors finds persistent and significant differences in household wealth among families of different racial and ethnic groups. Graph 3 illustrates median and mean net worth by race. The median wealth of white households was almost 10 times that of Black or African American households. Mean household net worth also was much lower for Black or African American households (\$138,000) relative to white households (\$934,00). Lower levels of income and wealth decrease the ability of households to weather economic shocks, in particular those that undermine the value of housing.

GRAPH 3

**MEDIAN AND MEAN HOUSEHOLD NET WORTH BY RACE AND ETHNICITY: UNITED STATES, 2016
(IN THOUSANDS OF 2016 DOLLARS)**



Source: Board of Governors of the Federal Reserve System, 2016 Survey of Consumer Finances. In thousands of 2016 dollars.

These inequities were accentuated by the Federal Reserve Bank's accommodative monetary policies. To stimulate and sustain economic growth, the Federal Reserve has maintained relatively low interest rates since the onset of the Great Recession. As interest rates declined, capital flowed into equities and real estate in search of higher returns. As stock prices increased, the portfolios of Americans who held individual stocks or mutual funds rose, leading to increased household wealth. However, only about half of American households have sufficient savings to invest in the stock market, so these gains in wealth were not equally distributed across the population.

The gains in housing values increased the wealth of homeowners, but since homeownership rates are higher for whites relative to African Americans and Hispanics, these gains were not proportionally distributed by race. Furthermore, increasing housing values "priced out" many Americans, shifting their demand to rental housing, and leading in turn to increased rental prices. In other words, if you owned a house, the last decade was likely beneficial to your personal wealth. If you rented, however, you were not able to partake in these gains. The net effect of the Federal Reserve's monetary policy was to exacerbate existing inequalities in the distribution of wealth. The gains at the top of the income distribution dwarfed the gains of those in the middle or at the bottom. Hispanics and African Americans also found that, compared to whites and Asians, their gains in wealth were relatively small over the last decade.

Poverty In Virginia

Graph 4 shows that in 2010, the poverty rate in the United States was 15.3%, approximately four percentage points higher than the Commonwealth. A sustained bout of economic growth, however, lifted millions out of poverty across the nation. By 2019, the national poverty rate had fallen to 12.3%. For Virginia, the poverty rate dropped from 11.1% in 2010 to 9.9% in 2019. The poverty rate declines slowly in periods of economic expansion and rises quickly in periods of economic contraction. In other words, it is "sticky," in that once increased, the poverty rate is slow to decline. The relative "stickiness" of Virginia's poverty rate is illustrative of the limits of economic growth on lifting all households out of poverty.

The poverty rate is closely tied to employment, which, in turn, is strongly correlated with economic growth. Households that experienced either unemployment or part-time work for economic reasons were more likely to fall closer to or below the poverty line. There also appears to be a natural floor on the poverty rate. Even during the historic national economic expansion following the Great Recession, about 1 in 10 individuals nationally and in the Commonwealth were living below the poverty line.

With the poverty rate being closely tied to economic conditions, it should be no surprise that the poverty rate varies considerably across metropolitan areas in the Commonwealth and that some metros observed declines in the poverty rate while others experienced increases.

Table 5 shows how the poverty rate evolved across Virginia's metropolitan areas. Almost all of the metros reduced the poverty rate to some extent. The poverty rate increased in the Blacksburg-Christiansburg metro area from 22.2% in 2010 to 22.9% in 2019. Even though the Harrisonburg metro area saw the poverty rate decline by 5.5 percentage points, from 19.9% in 2010 to 14.4% in 2019, this still meant that approximately 1 in 7 individuals remained below the poverty line in 2019. Poverty rates were virtually unchanged in the Charlottesville, Virginia Beach-Norfolk-Newport News and Washington, D.C., MSAs. The Staunton and Harrisonburg metro areas experienced the largest declines in the poverty rate, most likely due to increases in median household incomes and lower rates of unemployment.

TABLE 5

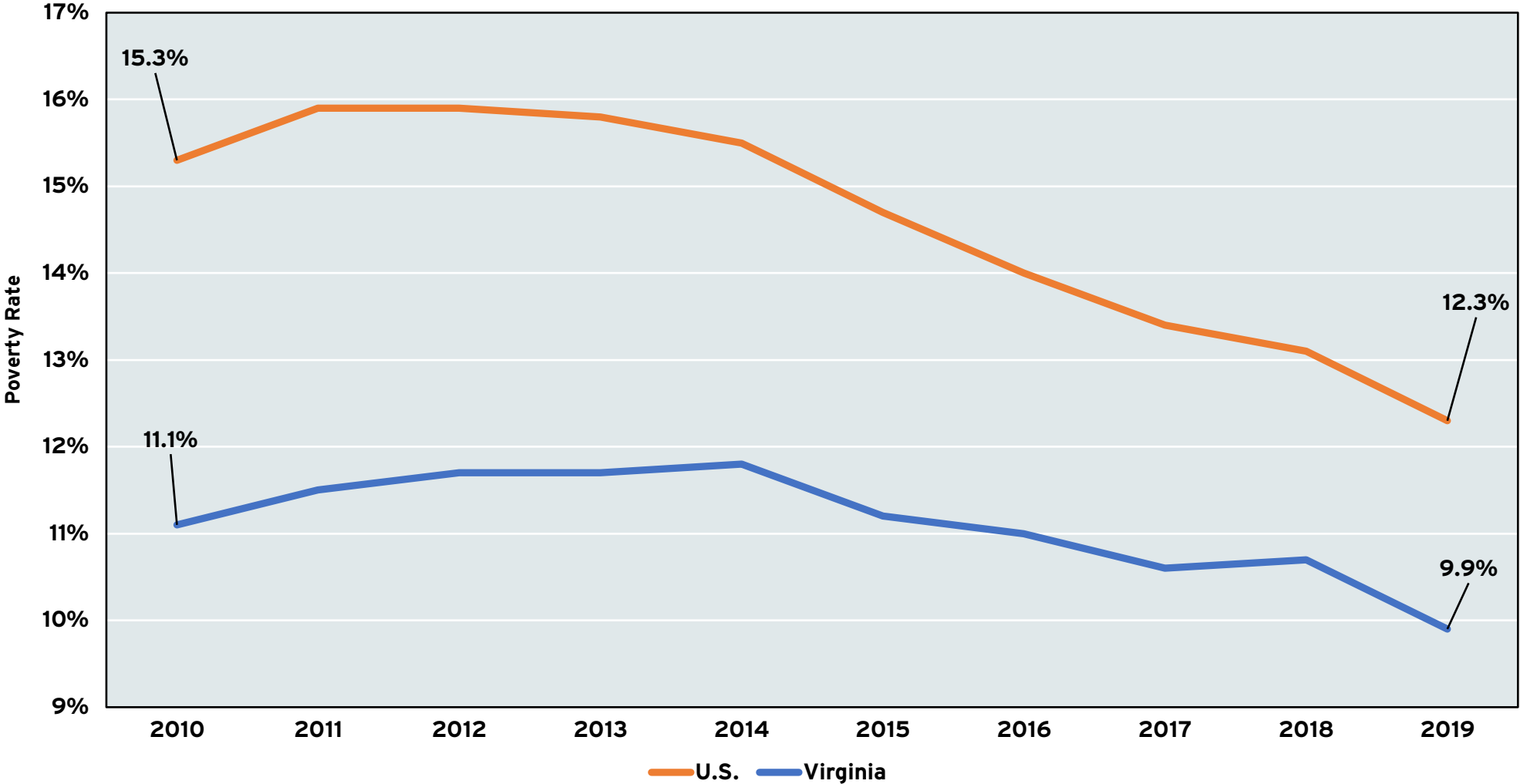
**POVERTY RATE:
UNITED STATES, VIRGINIA AND VIRGINIA'S METROPOLITAN
STATISTICAL AREAS, 2010 AND 2019**

| Metropolitan Statistical Area | 2010 Poverty Rate | 2019 Poverty Rate | Change |
|-------------------------------------|-------------------|-------------------|--------|
| Blacksburg-Christiansburg | 22.2% | 22.9% | 0.7% |
| Charlottesville | 12.3% | 11.2% | -1.1% |
| Harrisonburg | 19.9% | 14.4% | -5.5% |
| Lynchburg | 16.2% | 11.3% | -4.9% |
| Richmond | 11.6% | 10.0% | -1.6% |
| Roanoke | 13.7% | 11.8% | -1.9% |
| Staunton | 14.5% | 7.3% | -7.2% |
| Virginia Beach-Norfolk-Newport News | 10.6% | 10.6% | 0.0% |
| Washington-Arlington-Alexandria | 8.4% | 7.5% | -0.9% |
| Winchester | 12.5% | 8.6% | -3.9% |
| Virginia | 11.1% | 9.9% | -1.2% |
| United States | 15.1% | 11.8% | -3.3% |

Source: U.S. Census Bureau, American Community Survey (ACS) 1-year estimates, 2010-2019

Individual employment and establishment employment data attempt to measure how many people are working at a given time. These data are from two different surveys: the Current Population Survey (CPS) and the Current Establishment Survey (CES). The CPS asks individuals whether they are working, looking for work or not attached to the labor force. The CES asks employers about their employees. There is an important difference between the CPS and CES. An individual can only be employed once in the CPS; that is, he or she is either working, unemployed or not seeking to work. In the CES, an individual can show up multiple times if he or she has different jobs with different employers. For clarity, we present the CPS data as “individual employment” and the CES data as “jobs.”

GRAPH 4
POVERTY RATE:
UNITED STATES AND VIRGINIA, 2010-2019



Source: U.S. Census Bureau, American Community Survey (ACS) 1-year estimates, 2010-2019

Individual Employment Grows After A Slow Start

The civilian labor force consists of people age 16 and older who are either employed or unemployed but actively seeking work. Active-duty members of the armed forces and the institutionalized population are not included in the civilian labor force. If one is not employed and is not actively seeking or available for work in the last four weeks, he or she is not considered a part of the civilian labor force. A large gap between the civilian labor force and individual employment indicates that unemployment rates are high; conversely, a gap that narrows over time is indicative of higher employment and thus lower unemployment rates.

In Graph 5, we present civilian labor force and individual employment series for Virginia from 2010 to 2019. As one might expect, the gap between the civilian labor force and individual employment was larger at the beginning of the decade than the end. While the civilian labor force increased by 6.1% from 2010 to 2019, individual employment grew by 11.1% over the period.

As individual employment grew faster relative to the civilian labor force, Virginia's unemployment rate declined over the decade (Graph 6), reaching an annual average of 2.8% in 2019. Even though the Commonwealth's economic performance left much to be desired in the first half of the decade, by the end, if people wanted to be employed, it was almost certain that they could find a job. At the end of 2019, the challenge for employers was finding skilled employees for open positions and retaining those employees.

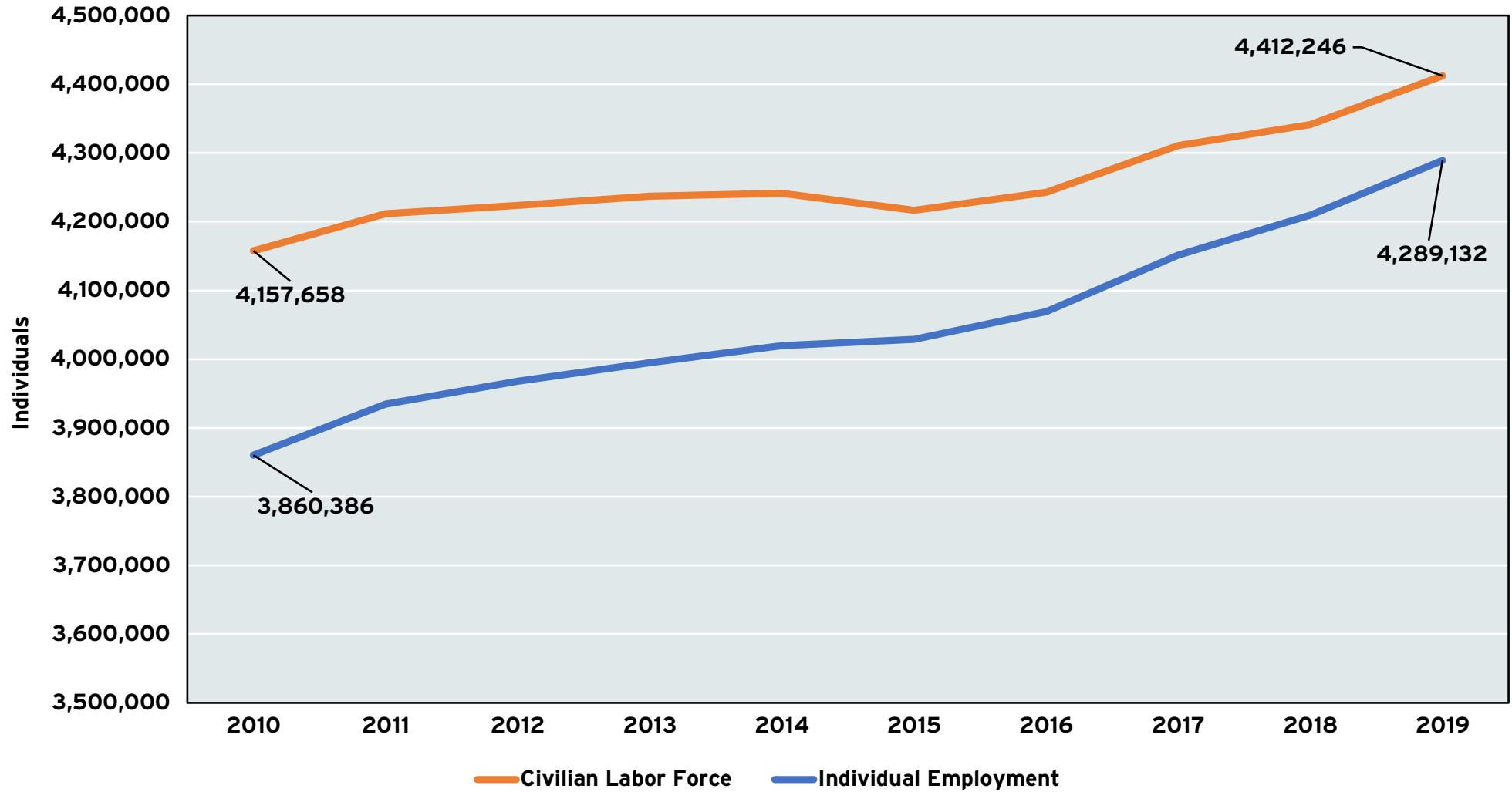
Individual employment growth outpaced the growth in the civilian labor force for every Virginia metropolitan area (Graph 7). However, a closer examination of the data suggests that some metros were confronting labor market challenges. The civilian labor force shrank over the decade in Lynchburg (-2.0%) and Roanoke (-0.5%). Four metro areas (Blacksburg, Harrisonburg, Staunton and Hampton Roads) saw their civilian labor force grow slower than the Commonwealth. If these metro areas fail to attract new workers in the coming decade, it will limit their ability to

grow relative to other metros in the state. This would result in lower rates of economic growth and in turn would likely reduce the attractiveness to new migrants.



GRAPH 5

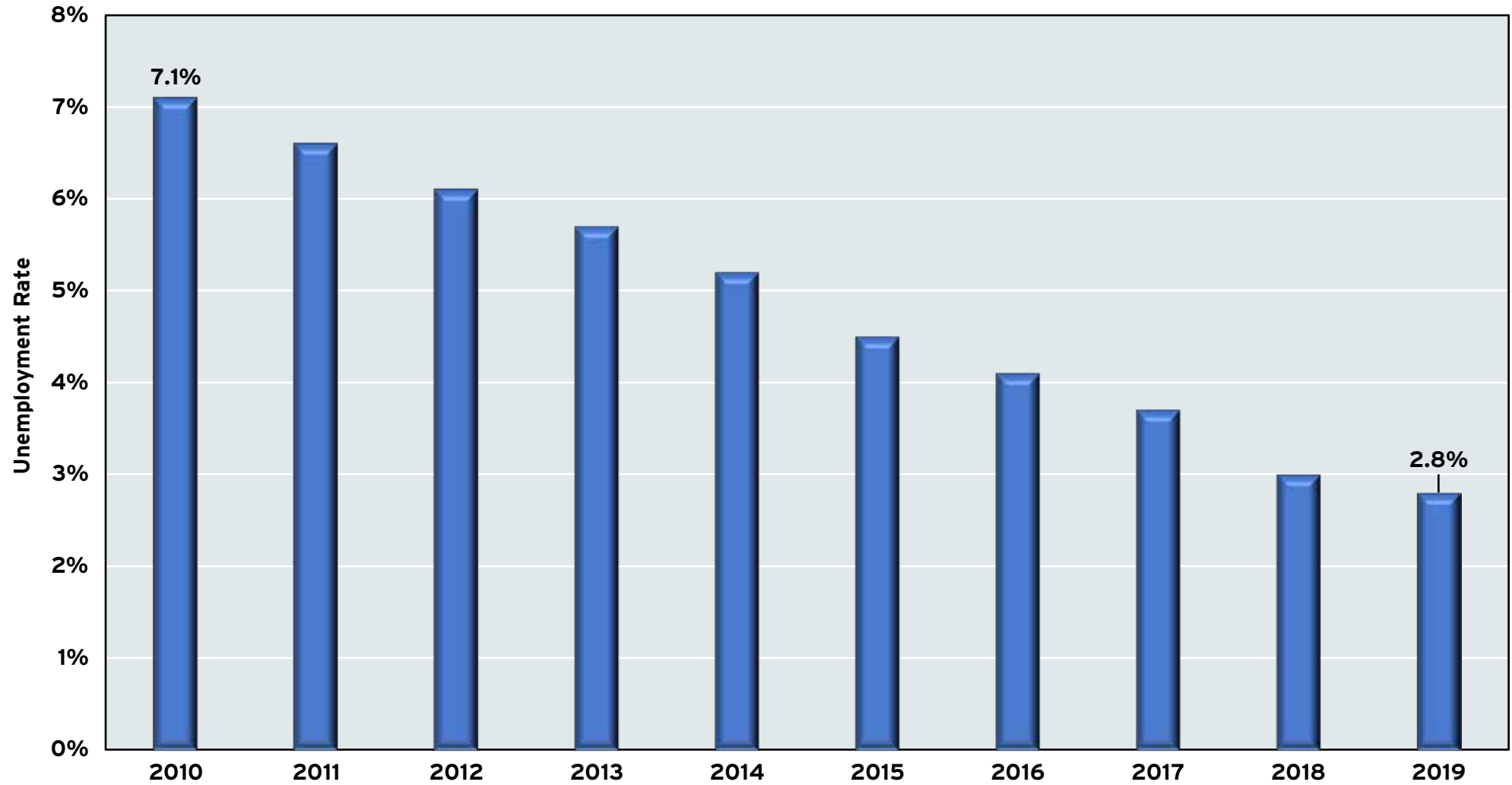
**CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT:
VIRGINIA, 2010-2019**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Annual averages of non-seasonally adjusted data.

GRAPH 6

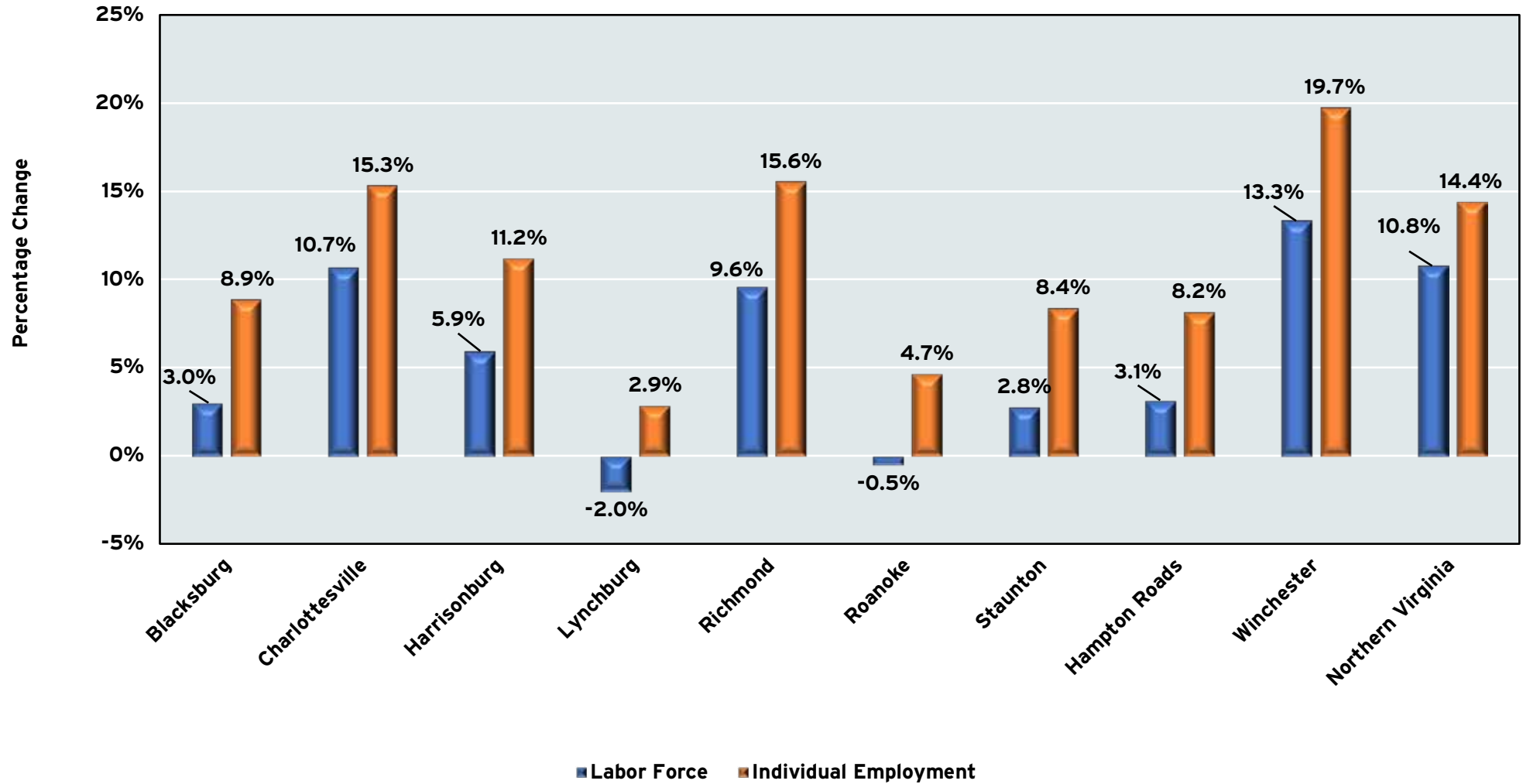
AVERAGE ANNUAL UNEMPLOYMENT RATE:
VIRGINIA, 2010-2019



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Annual averages are based on non-seasonally adjusted data.

GRAPH 7

PERCENT CHANGE IN INDIVIDUAL EMPLOYMENT AND CIVILIAN LABOR FORCE:
VIRGINIA'S METROPOLITAN STATISTICAL AREAS, 2010-2019



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics, non-seasonally adjusted data. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA. The BLS identifies Northern Virginia as Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford and Warren counties, and the cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas and Manassas Park.

Steady Job Growth After A Slow Start

As illustrated in Graph 8, Virginia added about 413,000 jobs from 2010 to 2019. The trend in job growth over the decade closely tracks with other labor market indicators. Virginia's job growth in the first half of the decade (3.8%) was slower than the latter half (5.2%). The number of jobs in the Commonwealth did not reach prerecession levels until 2014. Graph 9 compares Virginia's job growth with that of the United States. From 2010 to 2019, the number of jobs in Virginia increased by 11.3%, compared to 15.8% for the nation.

Turning our attention to Virginia's metropolitan areas, jobs in the Winchester MSA rose 20.7% over the decade, the largest percentage increase across Virginia's metros (Graph 9). We must caveat this statement with the recognition that Winchester is relatively small, accounting for about 2% of all the jobs in Virginia in 2019. Three of Virginia's metros (Hampton Roads, Northern Virginia and Richmond) account for more than 70% of all jobs in the state. Richmond's job growth was higher than that of the nation, and Northern Virginia's growth was slightly below that of the United States. On the other hand, job growth in Hampton Roads was markedly slower than either of these metros or the nation and contributed to slow job growth in the Commonwealth.

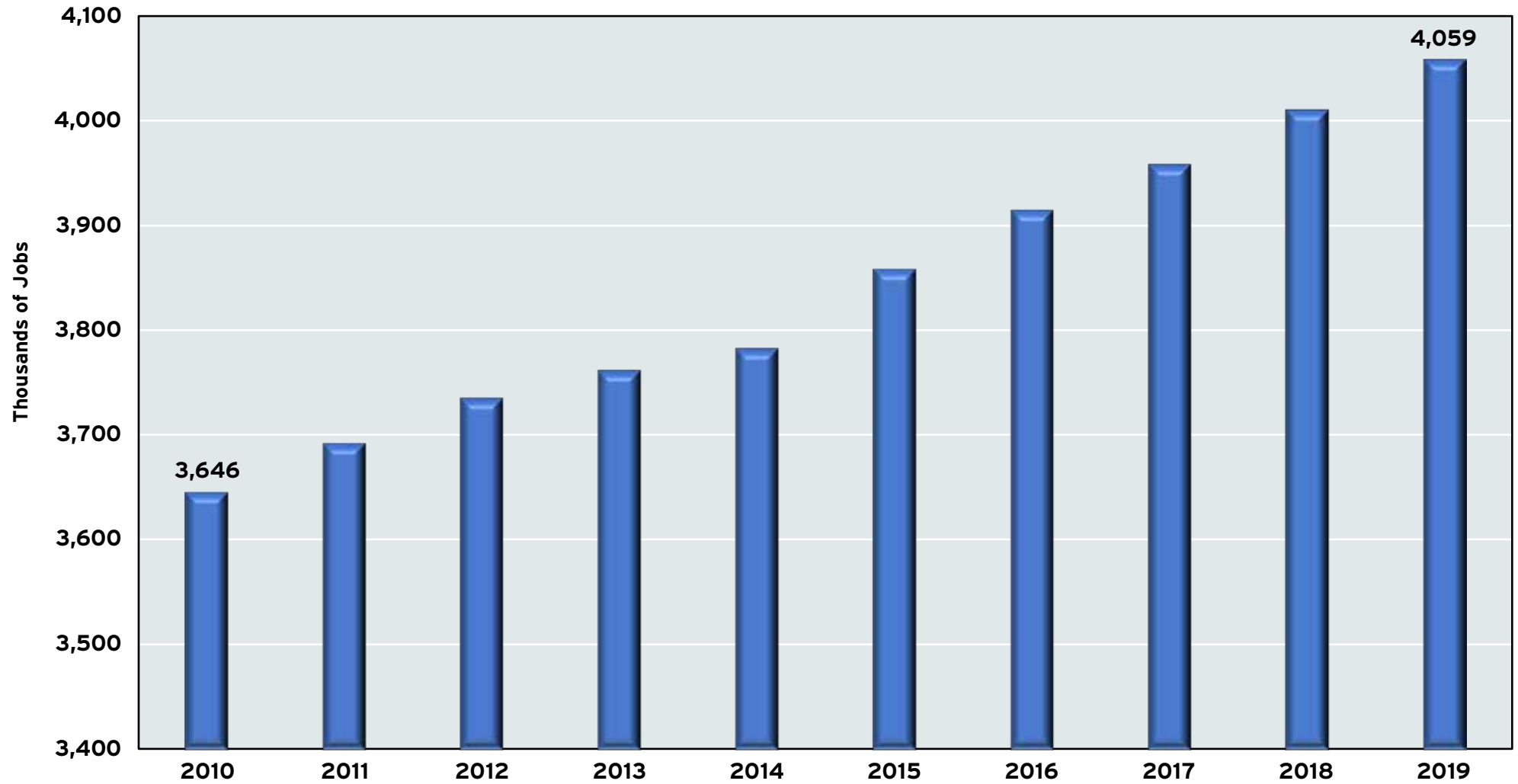
Taking a deeper dive into job growth in Virginia, Graph 10 shows which industries added or lost jobs over the decade. The largest gains were in the professional and business services sector, which added 115,900 jobs, followed by education and health services (92,100) and leisure and hospitality (69,300). The two largest industry sectors – professional and business services and the combined federal, state and local government sectors – accounted for roughly the same share of total nonfarm jobs in Virginia in 2019. Yet, the government sectors (24,100) added far fewer jobs over the decade. The information sector was the only major sector to lose jobs, shedding 7,800 jobs from 2010 to 2019.

The good news on job gains over the previous decade has been tempered by the onset of the COVID-19 pandemic. Leisure and hospitality and education and health services were among the top sectors in terms of job gains over the last 10 years and the most impacted by the pandemic and its social distancing measures. The decline in government revenues is also likely to result in significant layoffs for state and local governments. Recovering these jobs will take time, especially for those jobs that require face-to-face interactions on a regular basis.



GRAPH 8

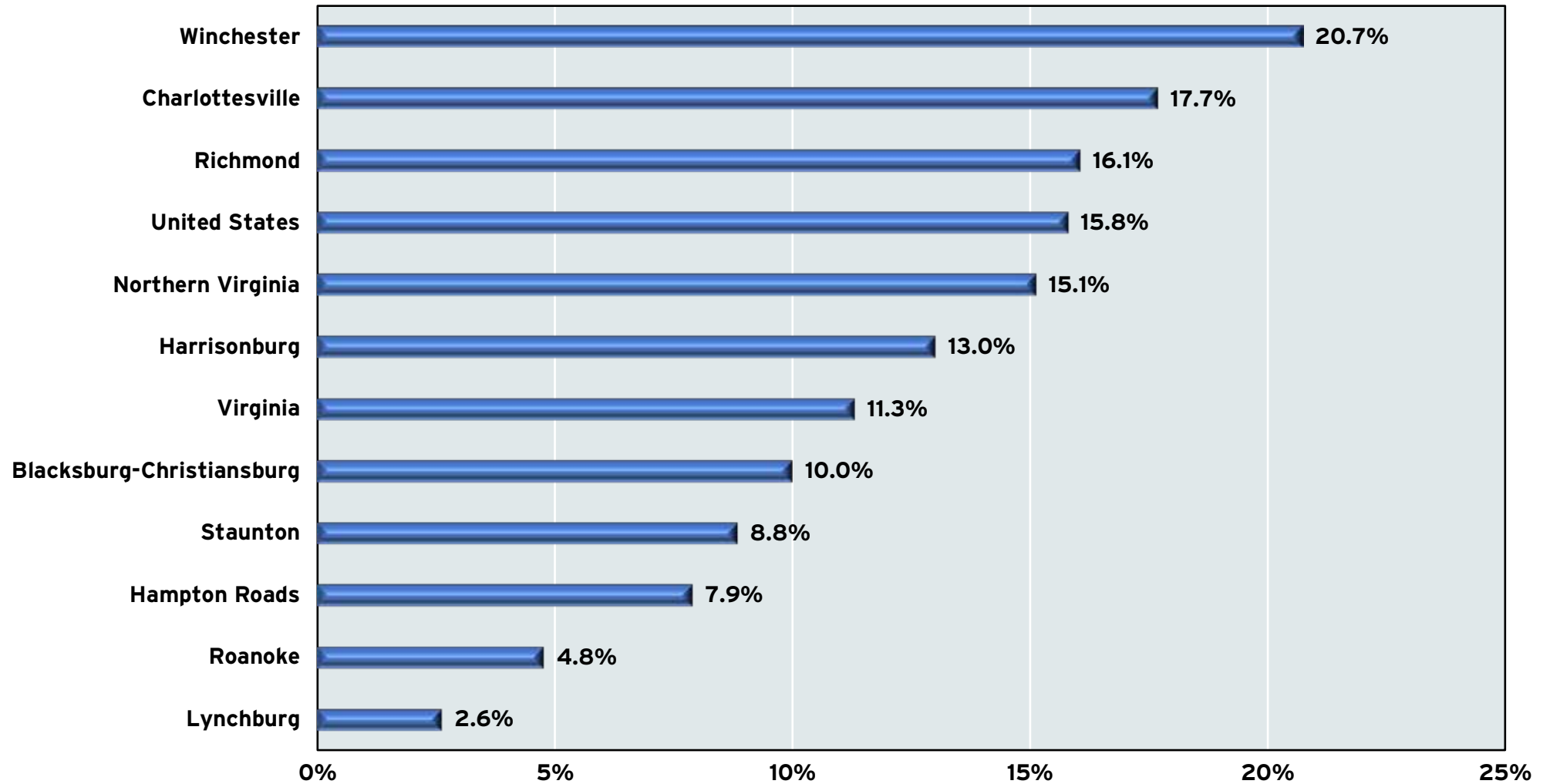
**AVERAGE CIVILIAN NONFARM EMPLOYMENT (JOBS):
VIRGINIA, 2010-2019**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Annual averages of non-seasonally adjusted data.

GRAPH 9

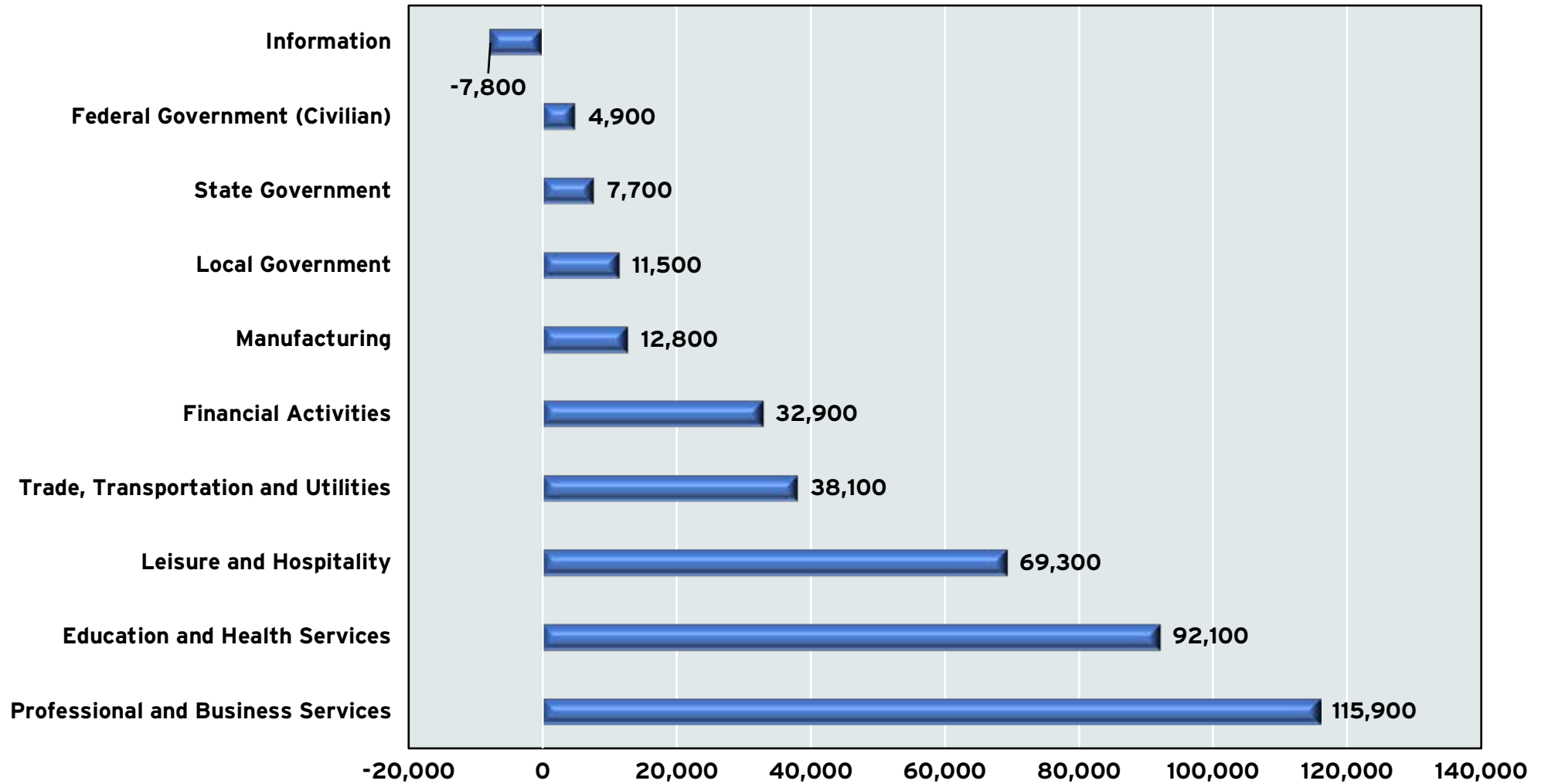
**PERCENTAGE CHANGE IN NET NEW CIVILIAN JOBS:
UNITED STATES, VIRGINIA AND VIRGINIA'S METROPOLITAN AREAS, 2010-2019**



Sources: Bureau of Labor Statistics, Current Establishment Survey, non-seasonally adjusted data, and the Virginia Employment Commission. The BLS identifies Northern Virginia as Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford and Warren counties, and the cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas and Manassas Park.

GRAPH 10

**CHANGE IN ANNUAL COVERED EMPLOYMENT (JOBS) IN SELECTED INDUSTRIES:
VIRGINIA, 2010-2019**



Sources: Virginia Employment Commission: Covered Employment and Wages and the Dragas Center for Economic Analysis and Policy, Old Dominion University

Single-Family Housing: Recovery And Growth

As with other parts of the Virginia economy, the impacts of the Great Recession and defense sequestration lingered in the housing market. Single-family residential building permits peaked in the Commonwealth at 49,959 in 2005 and fell to 15,625 by 2011. The decline in single-family permits from the prerecession peak was not unique to Virginia. Developers have appeared to shift construction away from single-family to multifamily units in many of the country’s metropolitan areas. While the number of permits in Virginia increased in the later years of the decade, the levels did not return to those observed prior to the Great Recession (Graph 11). On the other hand, nominal value of building permits increased from \$2.9 billion in 2010 to \$4.7 billion in 2019.

Zillow, the online database for real estate listings, publishes a variety of measures to estimate home values over time for a given region. The Zillow Home Value Index (ZHVI) measures the typical home value and market changes over time. The typical value of a single-family residential home in Virginia rose from \$240,717 in January 2010 to \$288,513 in December 2019, an increase of 19.9% (Graph 12). This increase, however, pales in comparison to the increase in value for the nation. The national average rose from \$176,231 in January 2010 to \$246,107 in December 2019, an increase of 39.7%. Faster growth nationally coupled with lower interest rates and constrained supply in some states accounted for the faster rise in typical home values nationally relative to the Commonwealth.

The growth in median home values among Virginia’s metropolitan areas is largely a reflection of the labor market and economic activity trends discussed previously. The areas able to attract more jobs and people over the decade saw home values increase as a result. As illustrated in Table 6, Washington-Arlington-Alexandria had the largest increase in median home values (29.5%), followed by Winchester (28.4%). In Virginia Beach-Norfolk-Newport News, a typical home’s value increased only 5.4% over the 10-year period.

When compared to the previous decade, the twin impacts of the Great Recession and sequestration are apparent. Graph 13 shows the percentage change in single-family residential home values over the last two decades for Virginia’s metropolitan areas, Virginia and the nation. One story is consistent across all of the Commonwealth’s metro areas: the appreciation in median housing values in the 2000-2009 decade exceeded that of the most recent decade. The difference is most stark in Hampton Roads, where the typical home value increased 93.8% from 2000 to 2009 but only 5.4% from 2010 to 2019.

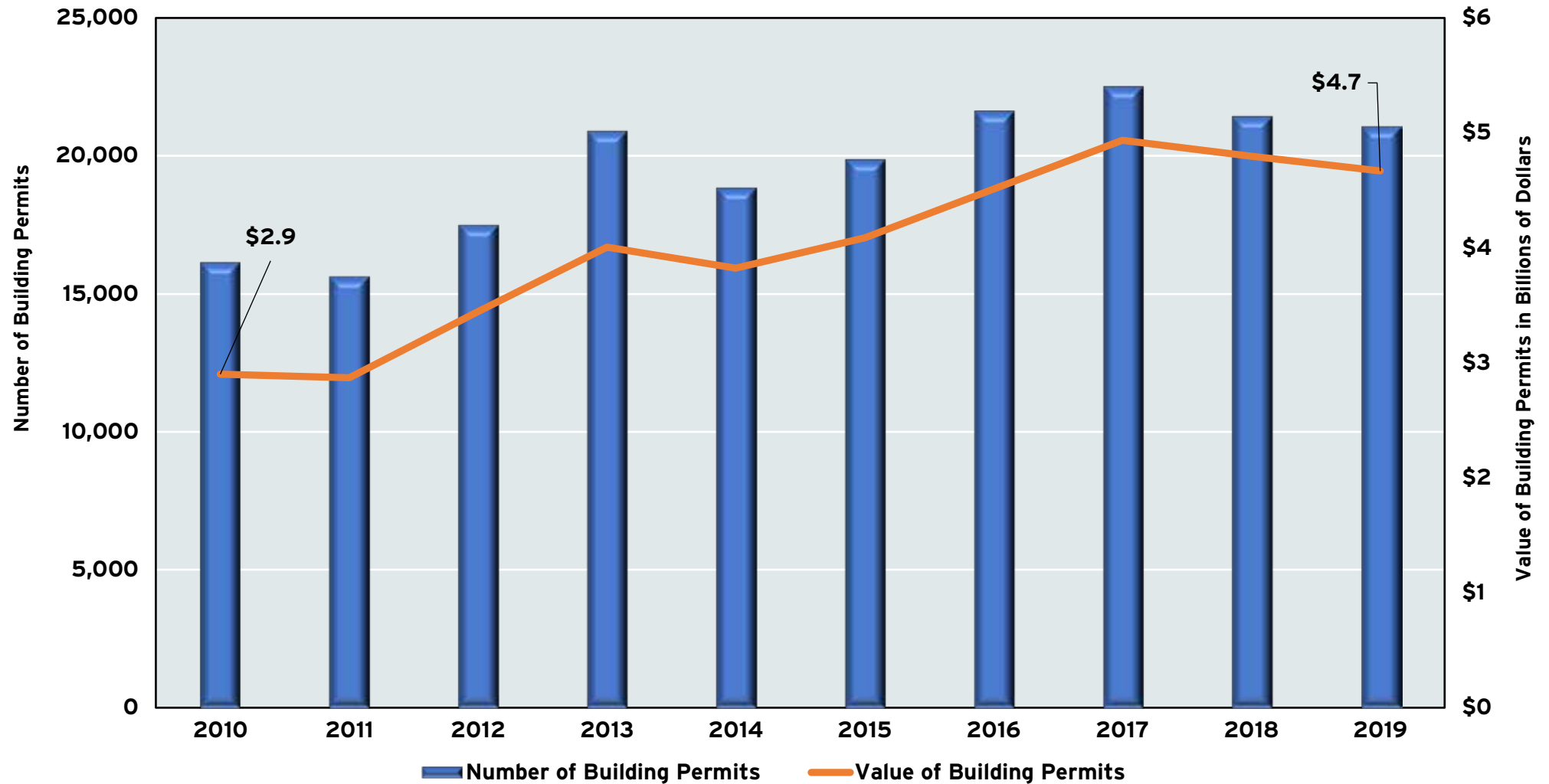
TABLE 6
ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES: UNITED STATES, VIRGINIA AND VIRGINIA METROPOLITAN AREAS, JANUARY 2010 AND DECEMBER 2019

| | Median Home Value January 2010 | Median Home Value December 2019 | Percentage Change |
|-------------------------------------|--------------------------------|---------------------------------|-------------------|
| Blacksburg-Christiansburg | \$159,133 | \$193,345 | 21.5% |
| Charlottesville | \$275,474 | \$323,547 | 17.5% |
| Harrisonburg | \$185,189 | \$223,845 | 20.9% |
| Lynchburg | \$151,086 | \$182,339 | 20.7% |
| Richmond | \$210,590 | \$250,688 | 19.0% |
| Roanoke | \$151,456 | \$184,112 | 21.6% |
| Staunton | \$170,388 | \$202,054 | 18.6% |
| Virginia Beach-Norfolk-Newport News | \$237,319 | \$250,078 | 5.4% |
| Washington-Arlington-Alexandria | \$345,684 | \$447,829 | 29.5% |
| Winchester | \$187,833 | \$241,099 | 28.4% |
| Virginia | \$240,717 | \$288,513 | 19.9% |
| United States | \$176,231 | \$246,107 | 39.7% |

Sources: Zillow (2020) and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 11

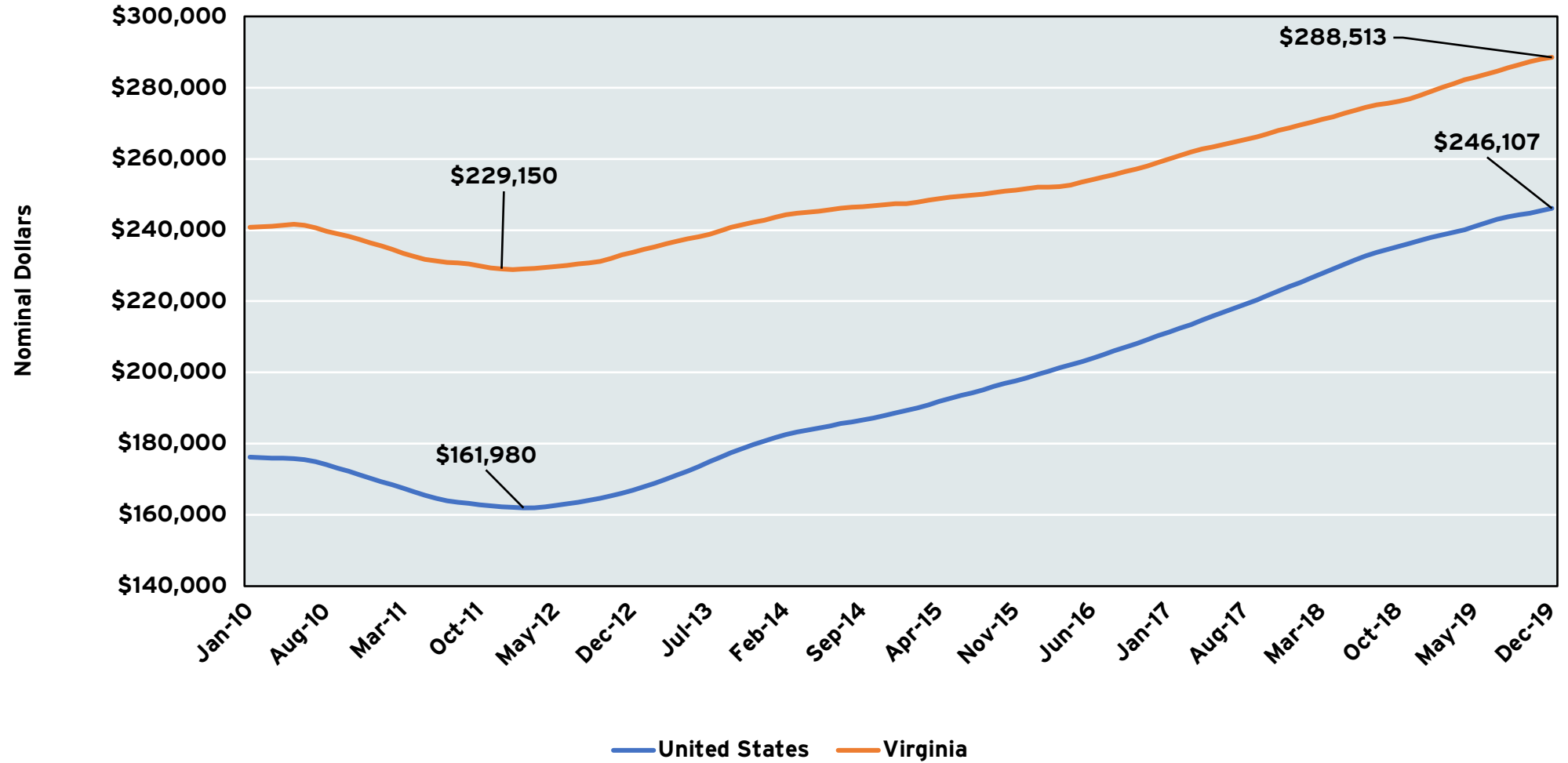
NUMBER AND NOMINAL VALUE OF ONE-UNIT, SINGLE-FAMILY RESIDENTIAL BUILDING PERMITS:
VIRGINIA, 2010-2019



Source: U.S. Census Bureau, Building Permits Survey by State (2019)

GRAPH 12

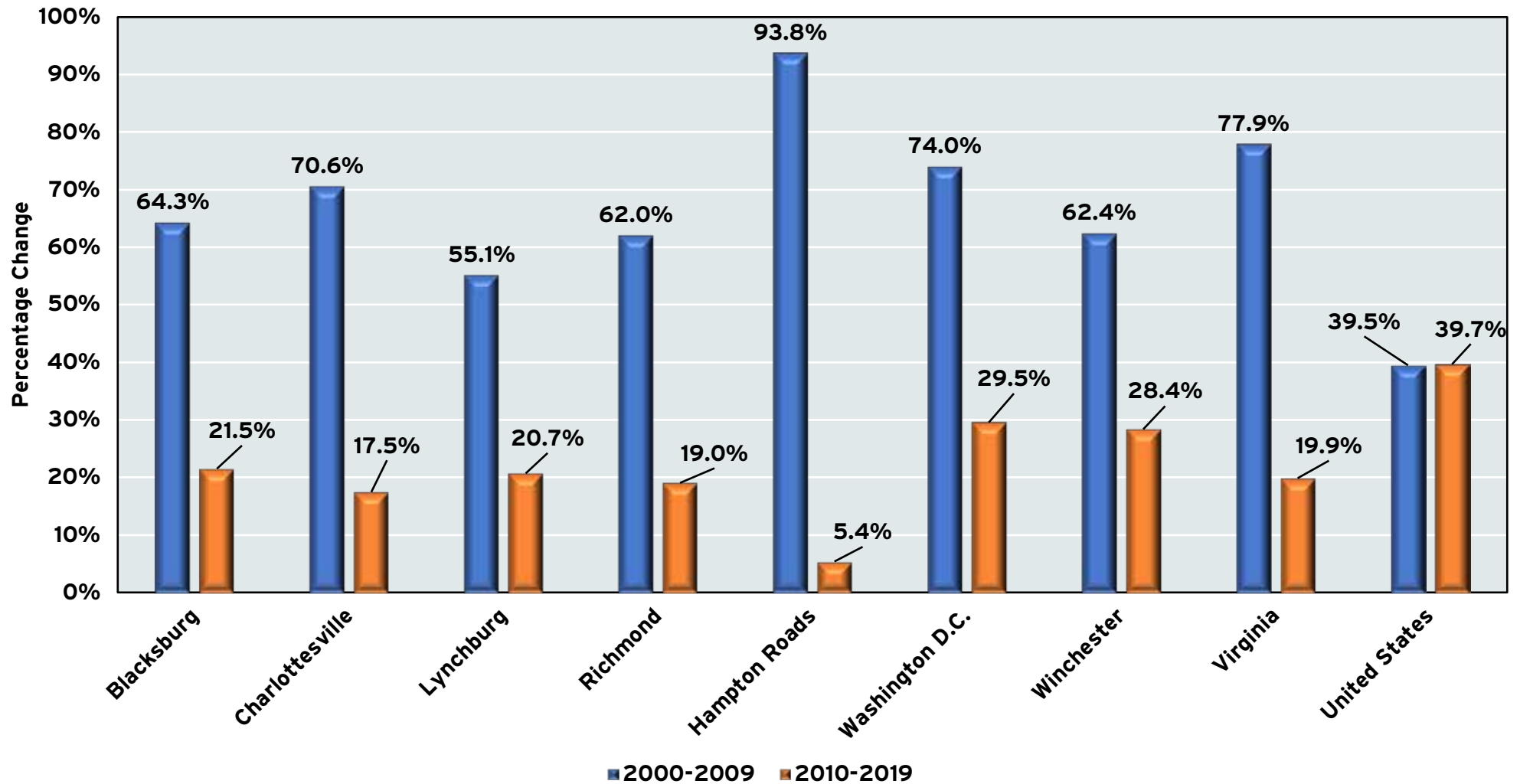
ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES:
UNITED STATES AND VIRGINIA, JANUARY 2010 TO DECEMBER 2019



Sources: Zillow (2020) and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 13

**PERCENTAGE CHANGE IN ZILLOW MEDIAN SINGLE-FAMILY HOUSING VALUE:
UNITED STATES, VIRGINIA AND SELECTED VIRGINIA METROPOLITAN AREAS,
JANUARY 2000 TO DECEMBER 2009 AND JANUARY 2010 TO DECEMBER 2019**



Sources: Zillow (2020) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Zillow Home Value Index (ZHVI) for single-family residence. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA. Washington, D.C., refers to the Washington, D.C.-Arlington-Alexandria MSA.

Closing Thoughts

The oft-repeated cliché, “It’s not how you start, but how you finish,” rang true for Virginia’s economy in the last decade. The Commonwealth ended the decade with five consecutive years of reasonable economic growth, low rates of unemployment across its metropolitan areas, a reputation for a place to “do business” and strong state finances. Although there were clouds on the horizon, especially with regard to ongoing federal deficits and debt, these threats to Virginia’s growth seemed far away.

While COVID-19 has demanded our attention over most of this year, the challenges of the past decade have not been swept aside. Virginia’s relatively poor performance in the first half of the decade can be, in part, attributed to federal budget sequestration and lingering effects of the Great Recession. When discretionary spending increased, Virginia’s economic growth, especially in Hampton Roads, accelerated accordingly. The surge in spending due to COVID-19 will raise the federal debt to \$25 trillion (if not more) by the end of 2021. At some point, the bill will come due. Whether it is the result of a change in national security priorities, a shift in domestic policies or bond markets requiring greater yields on U.S. government debt, at some point federal discretionary spending will either shift in composition, stagnate or be reduced. Virginia’s efforts to improve its business climate are laudable in light of these futuristic scenarios and new policy proposals should be carefully weighed with regard to their impact on the business community.

Virginia must also proactively address the legacy of systemic racism, as there is no economic justification for the disparate treatment of individuals based on race. We observe differences in median incomes and wealth that are attributable, in part, to public policy decisions made in the past. Zoning decisions after World War II, for example, inhibited the accumulation of wealth by Black or African American households. Disparities in the quality of public education, which continue today, reduce the opportunities available for minority households and, when coupled with the increasing cost of higher education, lower our economic potential. Addressing these challenges will require clear, frank and objective discussions on how inequities in the past result in inequalities in the present. We believe that improving K-12 education for

all Virginians is a good starting point because such investments create a more capable workforce that in turn increases the Commonwealth’s attractiveness to employers.

The rural-urban divide in Virginia is a topic we have discussed in previous State of the Commonwealth Reports. The divide continues to grow along economic and political lines. Urban areas accounted for more than 80% of Virginia’s economic output and jobs at the end of the decade. The concentration of population, income and wealth in urban areas is likely to continue over the coming decade. Employers are less likely to invest where broadband access is poor, transportation infrastructure is limited or schools are not of sufficient quality for their employees. **Ignoring this divide is to the state’s peril. It is time for the Commonwealth to act as such – as a shared “common wealth” rather than an urban crescent and everyone else.**

What, then, can be done? In 2016, we promoted increasing access to rural broadband, a call that is now widely adopted throughout the state. New advances in satellite broadband and 5G mobile networks have the promise of improving service in the future. The need for reliable broadband has only increased due to the COVID-19 pandemic. School districts found themselves supplying mobile hotspots and providing Wi-Fi on school buses. These gaps need to be addressed through public resources and by allowing cities and counties to establish their own broadband authorities to serve their constituents.

These, and other challenges, will test Virginia’s mettle in the coming years. We cannot ignore the past and its impact on the present and future. Learning these hard lessons and acting on them may seem daunting, but it is necessary. Together, we can find that we have much more in common than what sets us apart.



FEEDING VIRGINIA

I have the audacity to believe that people everywhere can have three meals a day for their bodies, education and culture for their minds, and dignity, equality and freedom for their spirits.

– Martin Luther King Jr.



One in 10 households in Virginia faces limited or uncertain access to adequate food. Even during the recently concluded economic expansion, more than 840,000 Virginians experienced difficulty finding sufficient nutritious food on a regular basis. With the onset of the COVID-19 pandemic, food insecurity burst from the shadows, as evidenced by long lines at food distribution sites for the recently unemployed and an increasing number of applications for government assistance. There is want in the land of plenty.

The U.S. Department of Agriculture (USDA) defines food insecurity as limited or uncertain access to adequate food. Hunger, on the other hand, is a physical sensation that is distinct from food insecurity. A food-insecure household may not often know where its next meals will come from, a reality that many Americans can't comprehend. Members of a food-insecure household may not go hungry, however, if they are able to cobble together financial resources and public and private aid. Yet the prospect of hunger exists and lingers in the minds of those responsible for feeding the members of a food-insecure household.

Food insecurity existed in the Commonwealth prior to the COVID-19 pandemic. As unemployment rapidly increased in 2020, the financial situation of many households deteriorated, and they turned to public and private agencies and organizations for help.

Caseloads for the Supplemental Nutrition Assistance Program (SNAP), the USDA’s primary household food assistance program, increased across the state. Not surprisingly, many new applicants were not previously enrolled in other federal assistance programs. Virginians who never before had worried where their next meal was coming from suddenly found themselves applying for aid.

Nonprofit organizations focused on providing food assistance have been severely impacted by the COVID-19 recession. During its first food distribution in April 2020 at Todd Stadium in Newport News, the Virginia Peninsula Foodbank ran out of supplies after serving 480 households. Police had to turn people away who were waiting in line. At the end of May, the food bank reported that it had seen a more than 60% increase in households needing assistance.¹ Churches and other organizations across Virginia that held similar events faced the same dilemma: The needs of the many often outweighed the supplies of the few.

According to the nonprofit group Feeding America, there were 842,870 food-insecure people in Virginia in 2018. Of these, 233,530 were children. Food insecurity was the lowest in Northern Virginia (7.1% of residents) and highest in the Blacksburg-Christiansburg metropolitan area (11.6% of residents). While most metro areas in the Commonwealth had a lower food insecurity rate than metros nationally, these averages concealed considerable variation. Several cities and counties had food insecurity rates above 15%, with food insecurity being closely correlated with local economic conditions.

Addressing food insecurity is more than just ensuring that Virginians have reliable sources of nutrition; it is also an economic development concern. Food insecurity negatively influences a host of outcomes. For workers, it lowers productivity. For students, it lowers academic performance. For older adults, it undermines the prospects of a viable standard of living. Now, during a global pandemic, food insecurity is more visible, with long lines at food banks and an increase in applications for public assistance.

In this chapter, we examine food insecurity in Virginia and look at how it has changed over time. We explore the challenges of food insecurity and spotlight those who are working to alleviate it. We conclude with steps we can take to address food insecurity at the personal, regional, state and national levels.

There are many reasons why individuals or households might find themselves without an adequate amount of food. It could be due to a lost job, the death of a loved one or a combination of circumstances that places a household in a state of food insecurity. There is no “typical” story of food insecurity; each individual or family has a story to tell. In July 2020, Sherrie and her husband, along with their two children, turned to the Blue Ridge Area Food Bank for help due to income losses associated with the COVID-19 pandemic.² Her husband, a plumber, saw a dramatic reduction in business and Sherrie “lost all [her] kids” for her in-home day care service. To continue providing for her family, Sherrie now works as a food server and cleans houses. Her husband has become the primary caregiver for their children, but Sherrie worries about the impact of COVID-19 on their children’s education. She is grateful for the Blue Ridge Area Food Bank, from whom she has received boxes of food and a renewed sense of optimism about the future.

¹ <https://www.wavy.com/news/local-news/newport-news/virginia-peninsula-foodbank-meets-60-increase-in-need-with-drive-thru-food-distributions/>.

² https://www.brafb.org/wp-content/uploads/2020/09/FINAL_BRAFB_Harvest_2020_issue2_9-3_lowRes-1.pdf.

Food Insecurity, Hunger And Poverty: A Primer

Food insecurity and hunger are terms often used interchangeably in conjunction with the concept of poverty. While these terms are related to one another, they sometimes cause confusion. To mitigate the confusion, in 2006, the USDA revised the definitions to make an explicit distinction between food insecurity and hunger.³ In this section, we examine each of these terms and see how they fit together.

We start with hunger, as everyone has experienced some form of hunger at some point. Hunger is the physical and mental manifestation of sensations associated with not eating a sufficient amount of food. A person can be hungry for numerous reasons, from skipping a meal because they are busy, to not having enough money to purchase food. For our purposes, we focus on hunger that arises from not having a reliable, consistent source of food.

The USDA currently defines food insecurity as “a household-level economic and social condition of limited or uncertain access to adequate food.”⁴ Feeding America, a nonprofit advocacy group, describes food insecurity as “a household’s inability to provide enough food for every person to live an active, healthy life.”⁵ Both of these definitions connect food insecurity to the underlying problem of a household’s lack of nutritious food. Feeding America’s definition goes beyond the sustenance of food and evokes the quality of life that comes from having an adequate supply of nutritious food.

Every month, the U.S. Census Bureau conducts the Current Population Survey (CPS) for the Bureau of Labor Statistics (BLS). This survey of 50,000 households provides monthly data that are used to determine measures such as the size of the civilian labor force and the unemployment rate, among others. Once a year, the Census Bureau asks the households to complete a supplemental survey about food security, food expenditures and the use of food and nutritional assistance programs. In 2019, for example, the supplemental survey covered 34,334 households and formed

a representative sample of about 130 million U.S. households. The USDA’s annual reports on household food security are derived from responses to the supplemental survey.

How does the USDA determine food security or insecurity? Households without children are considered to have *low food security* if they report three or more indicators of food insecurity in response to the first 10 questions in the supplemental survey. Households without children that report eight or more food-insecure conditions in response to the first 10 questions are considered to have *very low food security*. Households with children that report three or more indicators in response to the entire set of 18 questions are classified as having *low food security*. Households with children that report eight or more food-insecure conditions in response to the 18 questions are classified as having *very low food security*. If a household reports one or two food-insecure conditions, the USDA classifies it as having *marginal food security*. A marginally food-secure household has little or no indication of changes in diet or food intake. If a household reports no food-insecure conditions, it is classified as having *high food security*. In this chapter, we focus our analysis on food-insecure households, those with low or very low food security.

In 2019, 9 out of 10 low food security households, and more than 9 out of 10 very low food security households, worried about having sufficient food. Graph 1 illustrates the responses to the food security survey. One-third of low food security households reduced the size of meals or skipped meals entirely, and 9 in 10 very low food security households did the same. Adults with very low food security displayed signs of hunger and weight loss, and 1 in 3 missed an entire day of meals because of a lack of access to food.

³ For more information, see the Committee of National Statistics report “Food Security and Hunger in the United States: An Assessment of the Measure.”

⁴ <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security/#ranges>.

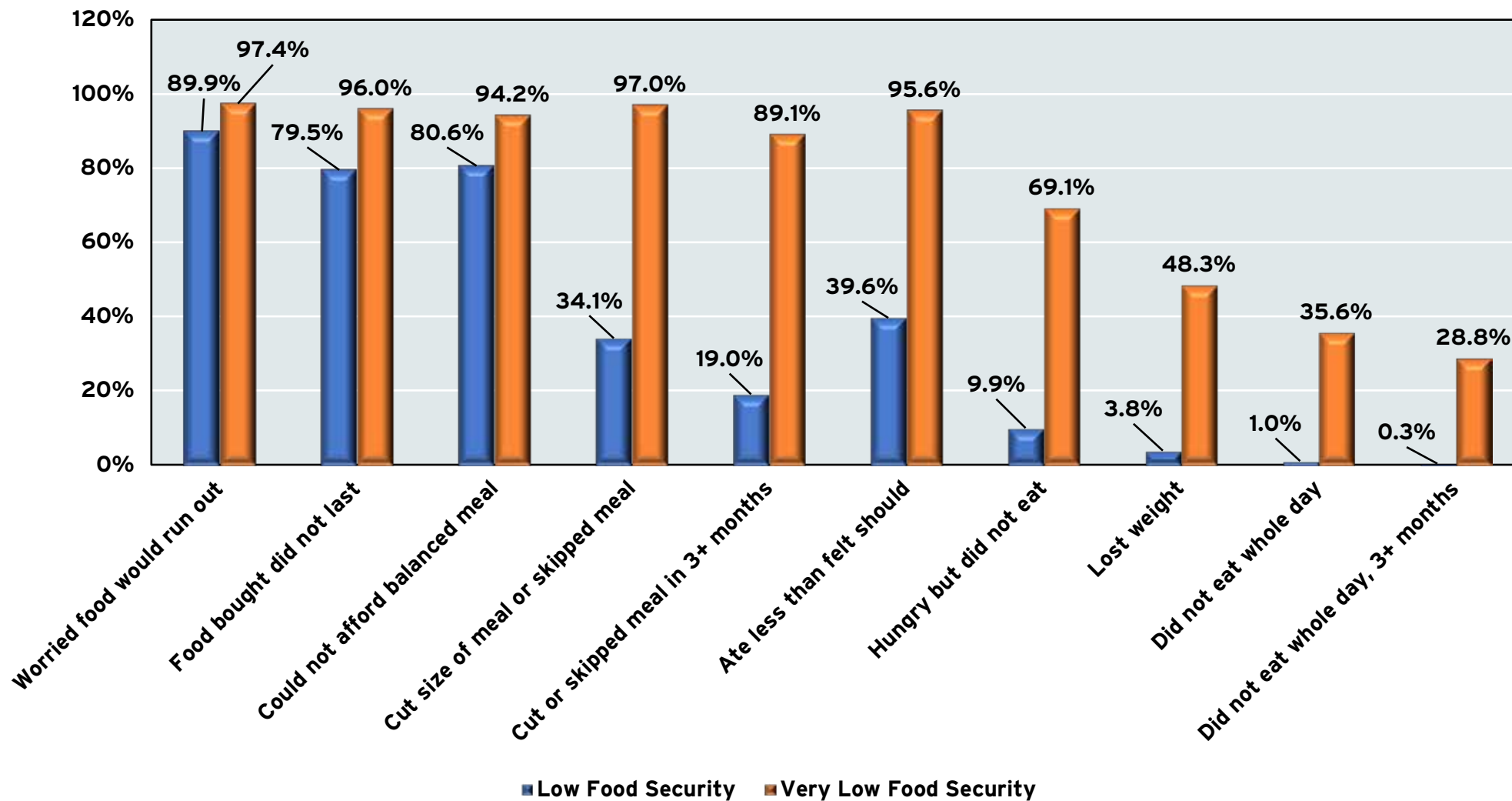
⁵ <https://www.feedingamerica.org/hunger-in-america/food-insecurity>.

Questions Used to Assess Food Security of Households

| | Question | Possible Responses |
|---|---|---|
| 1 | “We worried whether our food would run out before we got money to buy more.” | Was that often, sometimes, or never true for you in the last 12 months? |
| 2 | “The food that we bought just didn’t last and we didn’t have money to get more.” | Was that often, sometimes, or never true for you in the last 12 months? |
| 3 | “We couldn’t afford to eat balanced meals.” | Was that often, sometimes, or never true for you in the last 12 months? |
| 4 | In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food? | Yes/No |
| 5 | <i>(If yes to question 4)</i> How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? | |
| 6 | In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? | Yes/No |
| 7 | In the last 12 months, were you ever hungry, but didn’t eat, because there wasn’t enough money for food? | Yes/No |
| 8 | In the last 12 months, did you lose weight because there wasn’t enough money for food? | Yes/No |
| 9 | In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food? | Yes/No |
| 10 | <i>(If yes to question 9)</i> How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? | |
| Questions 11-18 were asked only if the household included children age 0-17 | | |
| 11 | “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” | Was that often, sometimes, or never true for you in the last 12 months? |
| 12 | “We couldn’t feed our children a balanced meal, because we couldn’t afford that.” | Was that often, sometimes, or never true for you in the last 12 months? |
| 13 | “The children were not eating enough because we just couldn’t afford enough food.” | Was that often, sometimes, or never true for you in the last 12 months? |
| 14 | In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food? | Yes/No |
| 15 | In the last 12 months, were the children ever hungry but you just couldn’t afford more food? | Yes/No |
| 16 | In the last 12 months, did any of the children ever skip a meal because there wasn’t enough money for food? | Yes/No |
| 17 | <i>(If yes to question 16)</i> How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? | |
| 18 | In the last 12 months did any of the children ever not eat for a whole day because there wasn’t enough money for food? | Yes/No |

GRAPH 1

INDICATORS OF ADULT FOOD INSECURITY:
UNITED STATES, 2019



Source: U.S. Department of Agriculture, Economic Research Service, using data from the December 2019 Current Population Survey Food Security Supplement

Graph 2 shows that 6.4% of American households experienced low food security at least once in 2019. Of the approximately 130 million households in the Census Bureau’s 2019 Current Population Survey Food Security Supplement, 4.1%, or 5.3 million households, experienced very low food security conditions at least once. When asked about food security in the last 30 days, the proportion of households experiencing difficulties fell by half. The USDA estimates approximately 2.3% of American households (3 million households) experienced very low food security in December 2019, nearly half the rate of households that experienced very low food security anytime during the year.

Knowing how long and how often households are food insecure is key to understanding what programs and policies can affect this situation. Research published in the *Journal of Hunger & Environmental Nutrition* in 2010 found that a majority of American households experienced at least one episode of food insecurity over a five-year period (Graph 3).⁶ Furthermore, 1 in 5 households experienced food insecurity for 2 out of 5 years, and 6 out of 100 households experienced food insecurity every year for the past five years. This study showed that households flow in and out of food insecurity and that more households experience food insecurity over several years than in any given year.

If food insecurity describes a lack of access to enough food at times, then poverty is a related term expressing a lack of income or resources to provide for oneself or one’s family. The Census Bureau measures poverty using an income-based threshold that varies with family size and composition (Table 1). A family of four, for example, would require an income below \$26,200 to be considered below the poverty line. While the poverty line is adjusted annually to capture the impact of inflation, it is a uniform threshold across the 48 contiguous states and the District of Columbia. Regional variations in the cost of living are not considered, and these variations may have significant impacts on food insecurity.

TABLE 1
POVERTY GUIDELINES FOR THE 48 CONTIGUOUS STATES AND THE DISTRICT OF COLUMBIA, 2020

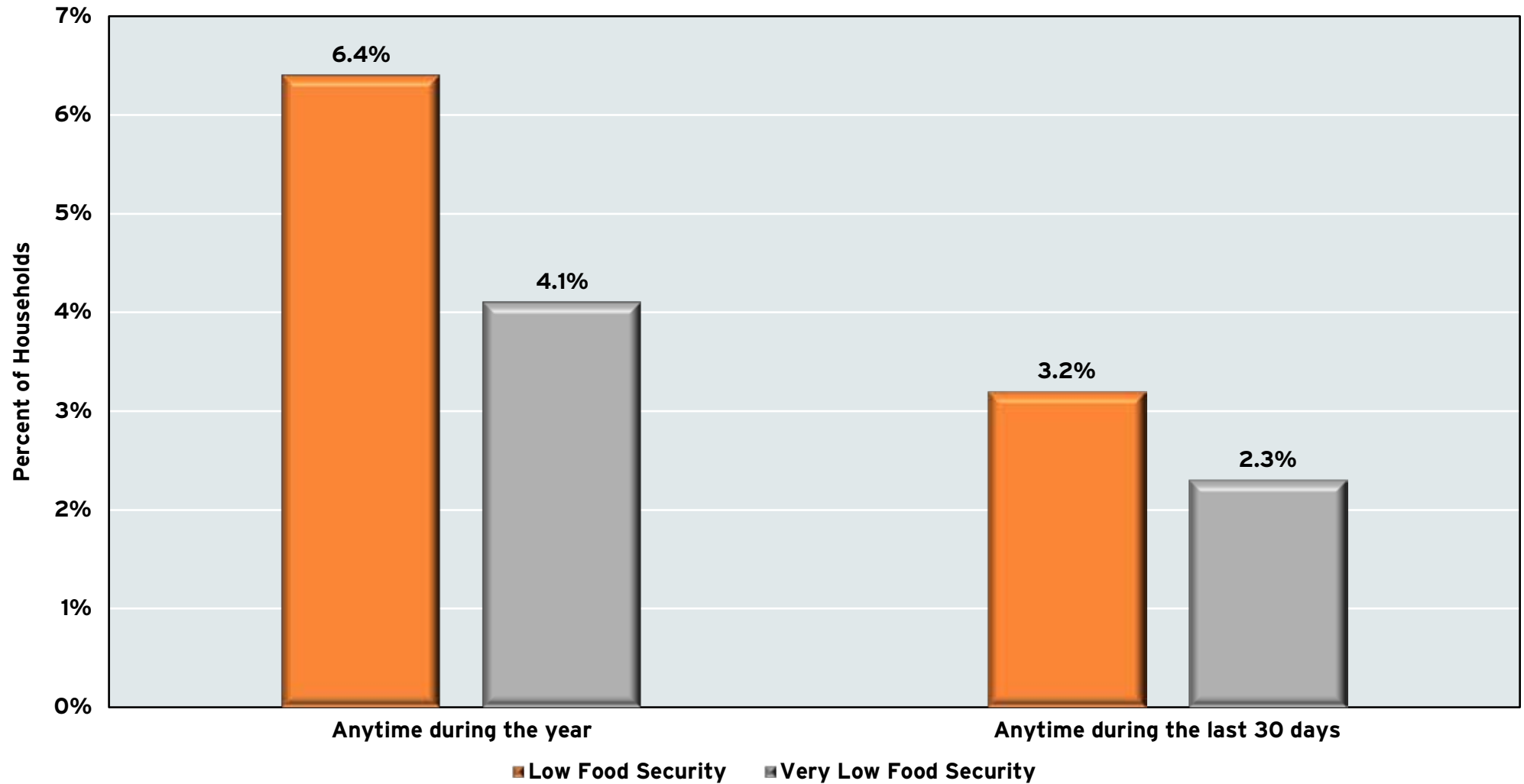
| Persons in Household | Poverty Line |
|----------------------|--------------|
| 1 | \$12,760 |
| 2 | \$17,240 |
| 3 | \$21,720 |
| 4 | \$26,200 |
| 5 | \$30,680 |
| 6 | \$35,160 |
| 7 | \$39,640 |
| 8 | \$44,120 |

Source: U.S. Department of Health and Human Services. For families/households with more than eight people, add \$4,480 for each additional person.

⁶ Parke E. Wilde, Mark Nord and Robert E. Zager (2010), "In Longitudinal Data From the Survey of Program Dynamics, 16.9% of the U.S. Population Was Exposed to Household Food Insecurity in a 5-Year Period," *Journal of Hunger & Environmental Nutrition*, 5:3, 380-398, DOI: 10.1080/19320248.2010.504115.

GRAPH 2

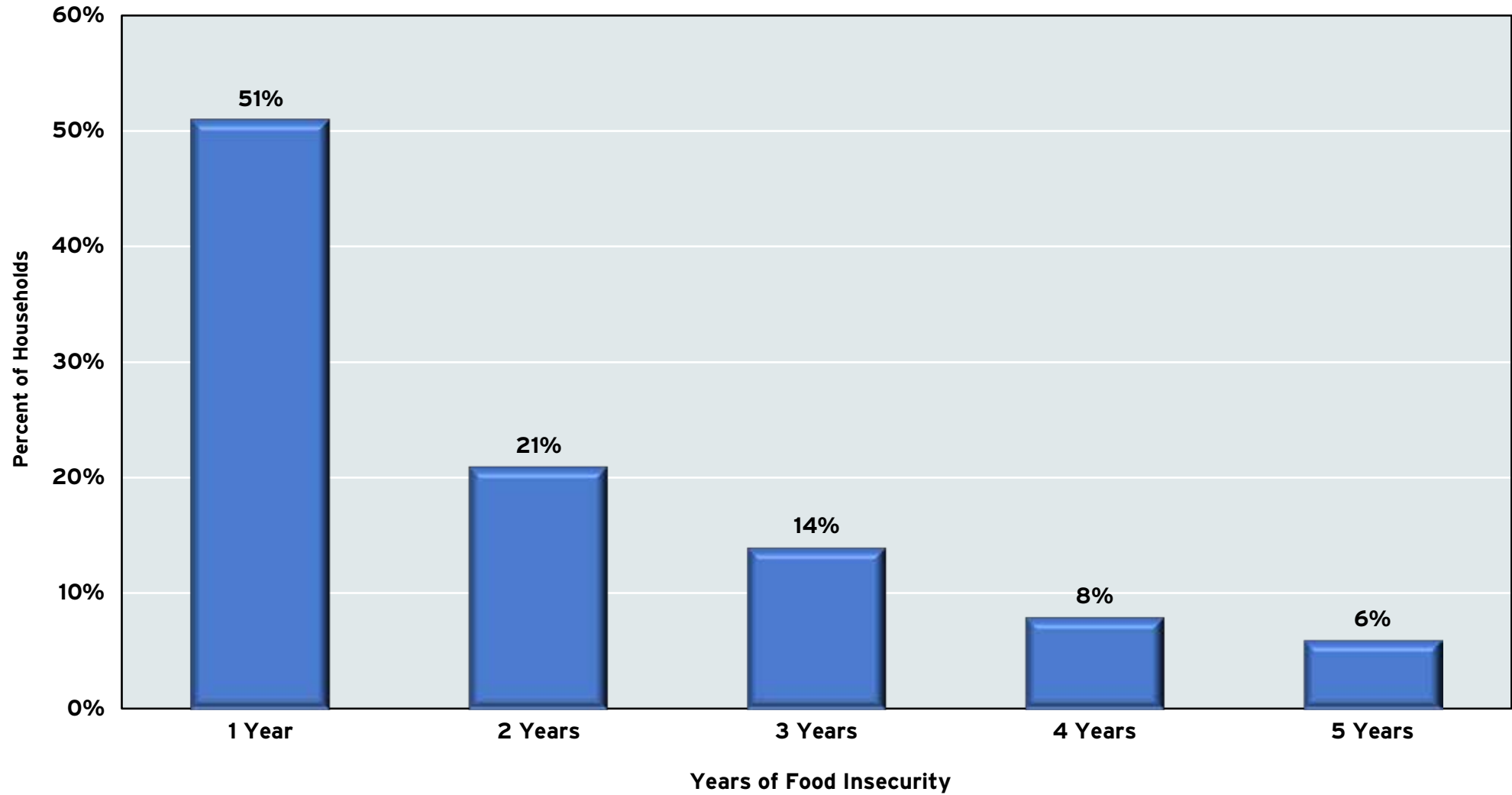
PREVALENCE OF HOUSEHOLD FOOD INSECURITY DURING THE YEAR, 2019



Source: U.S. Department of Agriculture, Economic Research Service, using data from the December 2019 U.S. Census Bureau Current Population Survey Food Security Supplement

GRAPH 3

FREQUENCY OF HOUSEHOLD FOOD INSECURITY IN THE UNITED STATES



Sources: U.S. Department of Agriculture, Economic Research Service, and Wilde, et al. (2010)

Table 2 shows the relationship between the poverty line and prevalence of food insecurity. The household income to poverty line ratio measures whether a household earns less than 100% of the poverty line, less than 185% of the poverty line or 185% or more of the poverty line. In 2019, 10.5% of American households were considered food insecure. However, 35% percent of households that were below the poverty line were food insecure, and approximately 28% of households that earned less than 185% of the poverty line were food insecure.

TABLE 2

PREVALENCE OF FOOD INSECURITY FOR U.S. HOUSEHOLDS BY POVERTY, 2019

| | Low and Very Low Food Security | |
|-----------------------------------|--------------------------------|---------|
| | Thousands of Households | Percent |
| All Households | 13,662 | 10.5% |
| Household Income to Poverty Ratio | | |
| Under 1.00 | 3,907 | 34.9 % |
| Under 1.85 | 7,356 | 27.6% |
| 1.85 and over | 3,577 | 5.1% |
| Income unknown | 2,728 | 8.4% |

Source: U.S. Department of Agriculture, Economic Research Service, using data from the December 2019 Current Population Survey Food Security Supplement

Low-income households are more likely to be in neighborhoods that are considered “food deserts” - areas with low access to healthy foods, or those where one must pay high prices for such food. It is a hotly debated topic as to what extent living in a food desert impacts food insecurity and health outcomes, such as obesity. A recent study published in the prestigious *Quarterly Journal of Economics*⁷ has looked to disentangle the effect of access to healthy foods from consumer demand for unhealthy options. The researchers found that only 10% of the differences in healthy eating between low- and high-income households comes from access, while the remaining 90% comes from differences in consumer demand for different types of food. These results are striking and call into question the efficacy of subsidizing and assisting grocers to locate in underserved areas.

7 H. Allcott, R. Diamond, J.P. Dubé, J. Handbury, I. Rahkovsky and M. Schnell (2019), “Food deserts and the causes of nutritional inequality,” *The Quarterly Journal of Economics*, 134(4), 1793-1844.

Food Insecurity In The United States

After the Great Recession of 2008-2009, food insecurity in the nation peaked at 14.9% in 2011 and declined throughout the following economic expansion (Graph 4). It should be no surprise that a similar pattern emerged in 2020 with the sudden onset of the COVID-19 recession. One result has been a rapid increase in unemployment, which has thrust some households into financial instability and food insecurity. We need only observe the lines at food banks or calls for social assistance to understand the severity of this ongoing economic crisis.

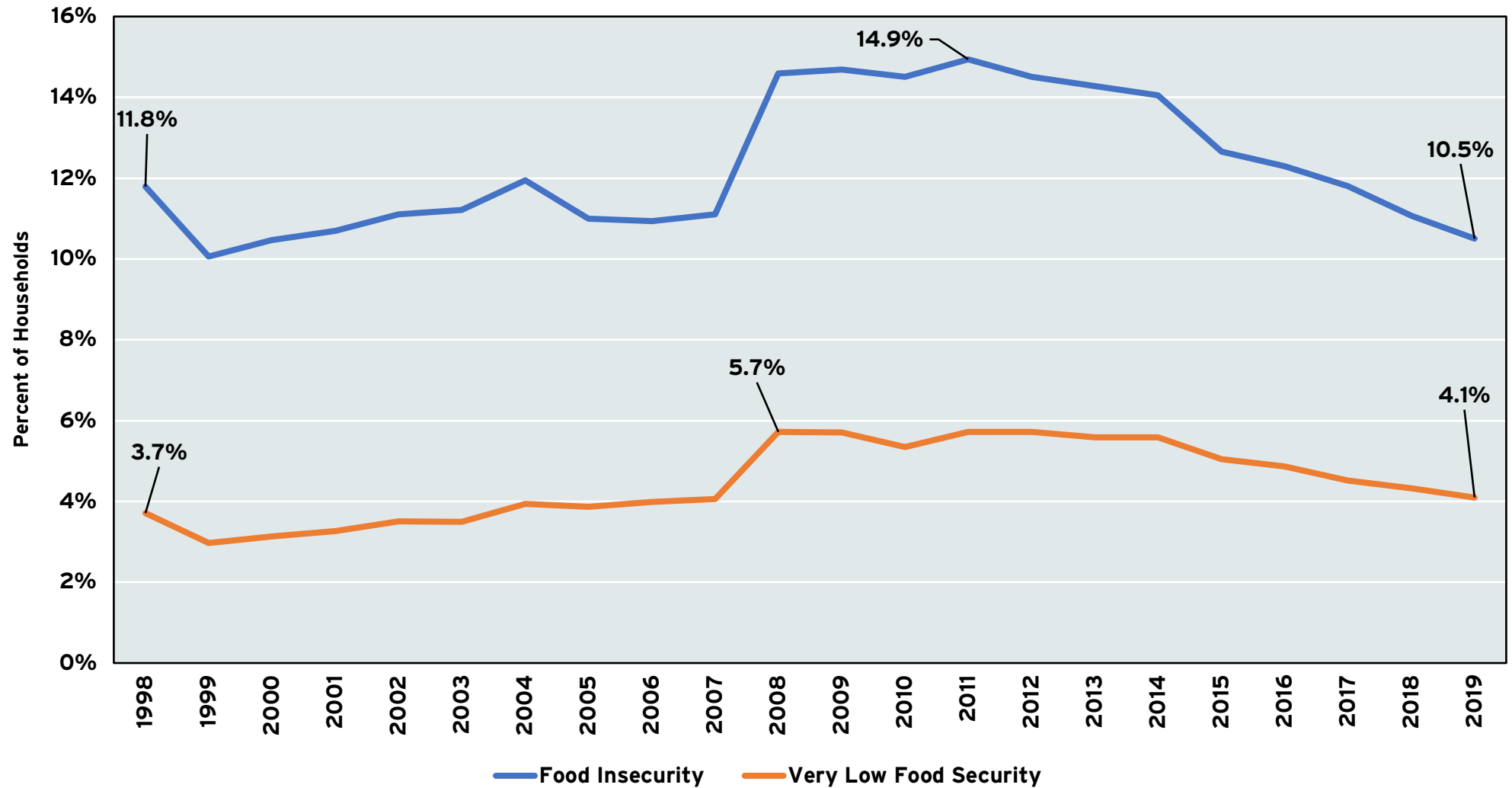
Graph 5 illustrates the change in average food insecurity by type of household from the Great Recession to 2017-2019 (the latest available data). During the Great Recession, nearly 1 in 5 households with children experienced food insecurity, but rates of insecurity dropped during the subsequent economic expansion. Households without children had lower rates of food insecurity during the recession, but these rates also changed little during the economic expansion. Food insecurity remains a persistent problem for 1 in 7 households with children and appears to be growing among households with older adults.

Graph 6 displays food insecurity and very low food security by race for 2019. Black or African American households reported the highest levels of food insecurity, followed by Hispanic households. White households consistently reported relatively lower levels of food insecurity, on average, than other households in the CPS Supplemental Survey. While unemployment rates among Blacks or African Americans dropped dramatically over the economic expansion, the gap in median household income between white and Black or African American households continued to persist over the period. As household income and food insecurity are closely correlated, it should be no surprise that a higher proportion of Black or African American households experienced and continue to experience difficulty maintaining reliable, consistent access to food.



GRAPH 4

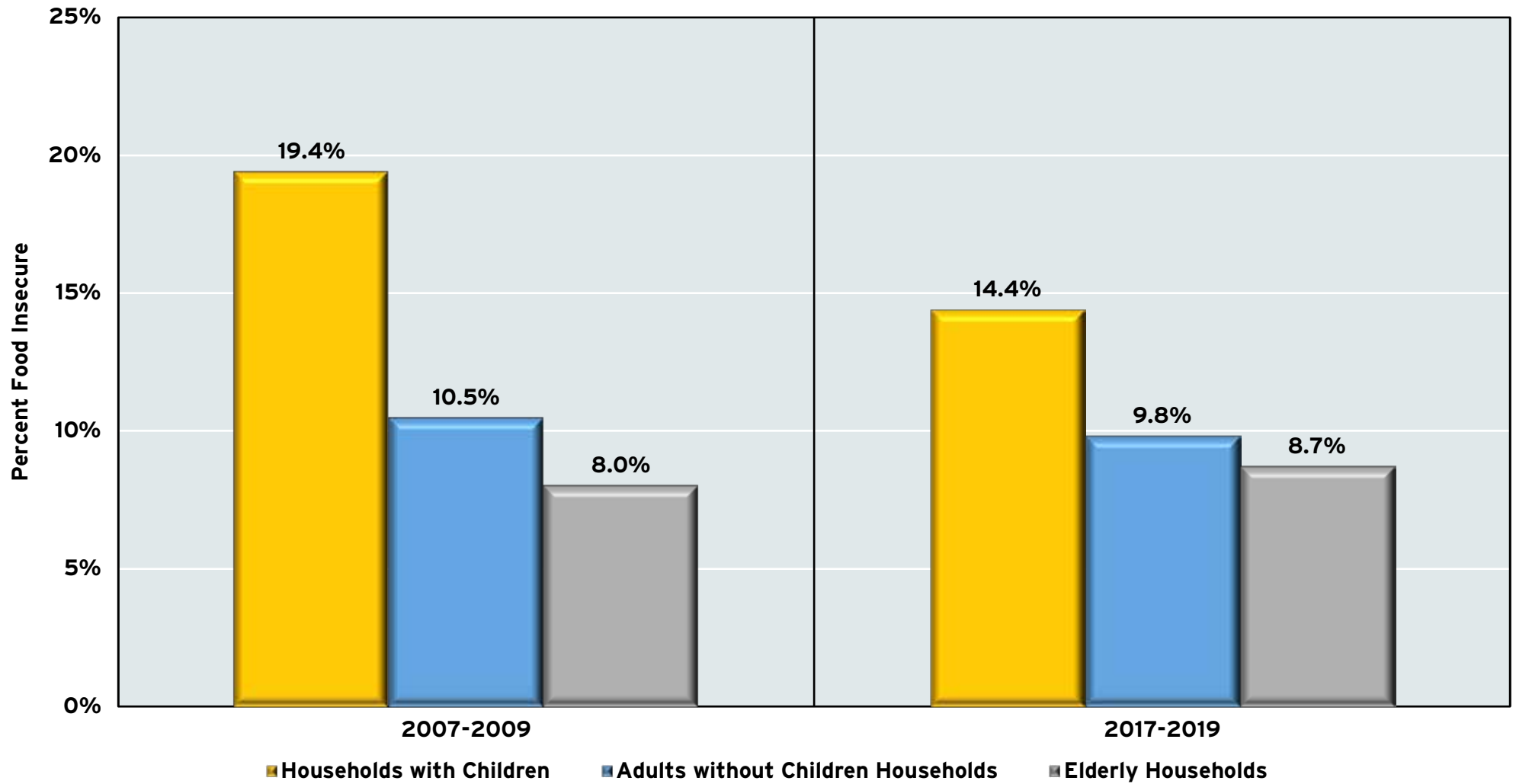
FOOD INSECURITY AMONG U.S. HOUSEHOLDS, 1998-2019



Source: U.S. Department of Agriculture Economic Research Service. Food insecurity includes both low and very low food-security status from the U.S. Census Bureau's Current Population Survey Food Security Supplement.

GRAPH 5

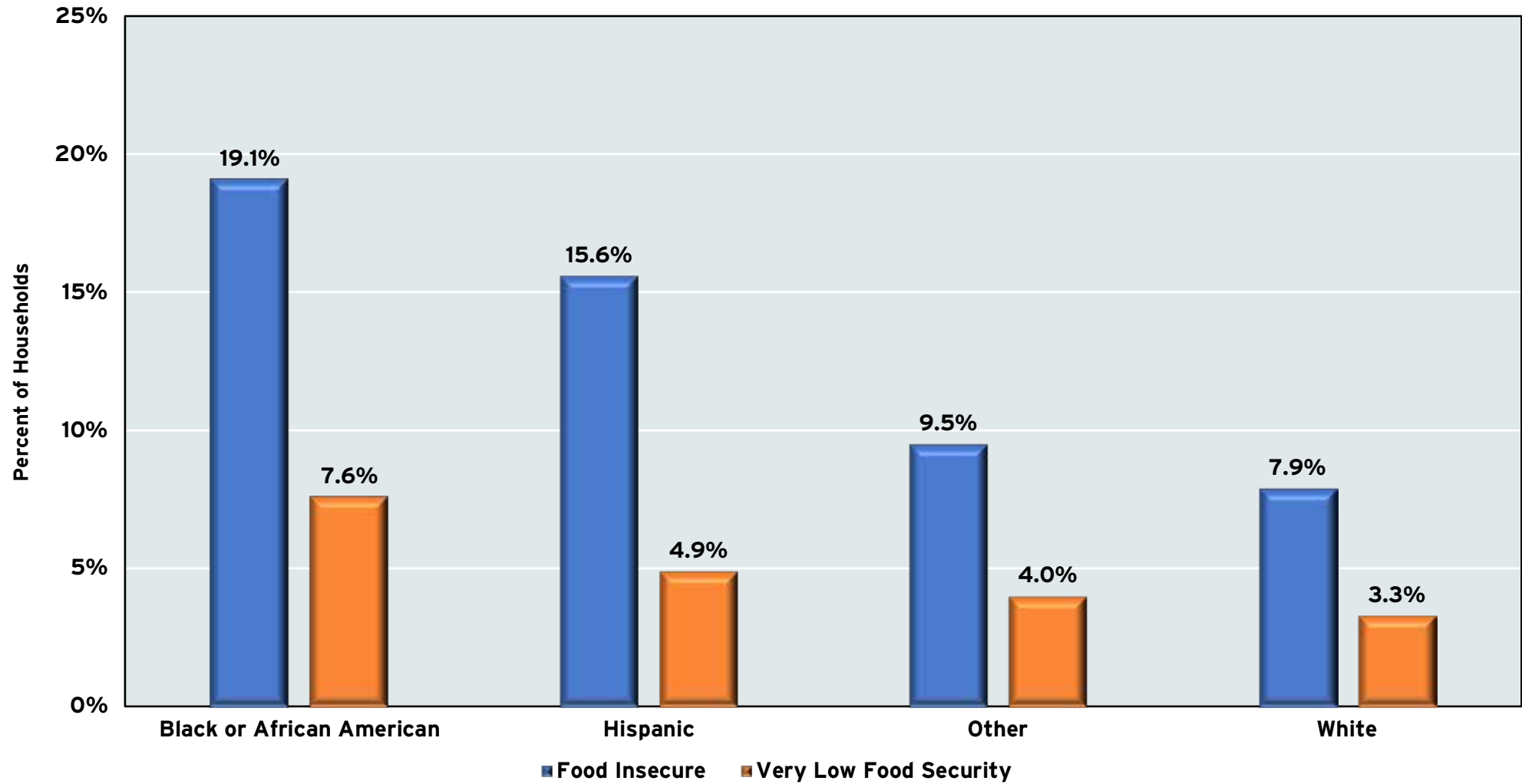
FOOD INSECURITY BY HOUSEHOLD COMPOSITION: UNITED STATES, VARIOUS YEARS



Source: U.S. Department of Agriculture, Economic Research Service, three-year averages

GRAPH 6

FOOD INSECURITY BY RACE: UNITED STATES, 2019



Source: U.S. Department of Agriculture, Economic Research Service, using data from the December 2019 Current Population Survey Food Security Supplement. Hispanics may be of any race.

Food Insecurity Among Children

Children are among the most vulnerable to food insecurity due to their reliance on their parents or caregivers. In light of this, the type of household a child grows up in can either mitigate or exacerbate his or her risk of being food insecure. Some of this risk comes from the household's composition; households headed by single mothers with children have a considerably higher likelihood of facing food insecurity (Graph 7). Further, many studies show a link between childhood food insecurity and household income. **Almost 60% of children in households close to the poverty line are living in food-insecure households.**

It should also be noted that children often spend time during the day in the care of someone outside of the immediate family. This includes a relative (e.g., aunt or grandparent), a neighbor or close acquaintance, or in a child care center. Recent studies⁸ of preschool-age children in low-income families have begun to shed light on the important role these caregivers play. In particular, child care centers tend to reduce childhood food insecurity, as they provide a reliable source of meals and snacks, thus reducing parental concerns of depleting food stores in the house. Further, child care centers are more likely to operate full time and year-round as well as participate in any number of federal programs.

The physical and mental health of their caregivers also seems to play an important role in children's risk of food insecurity. A child who lives in a household with a disabled adult is almost three times more likely to experience food insecurity.⁹ Chronic mental health conditions among adults in a household negatively impact food security for the entire household, including children.¹⁰ The reality of the situation seems to be that when adults in a household struggle, the children in the household also struggle.



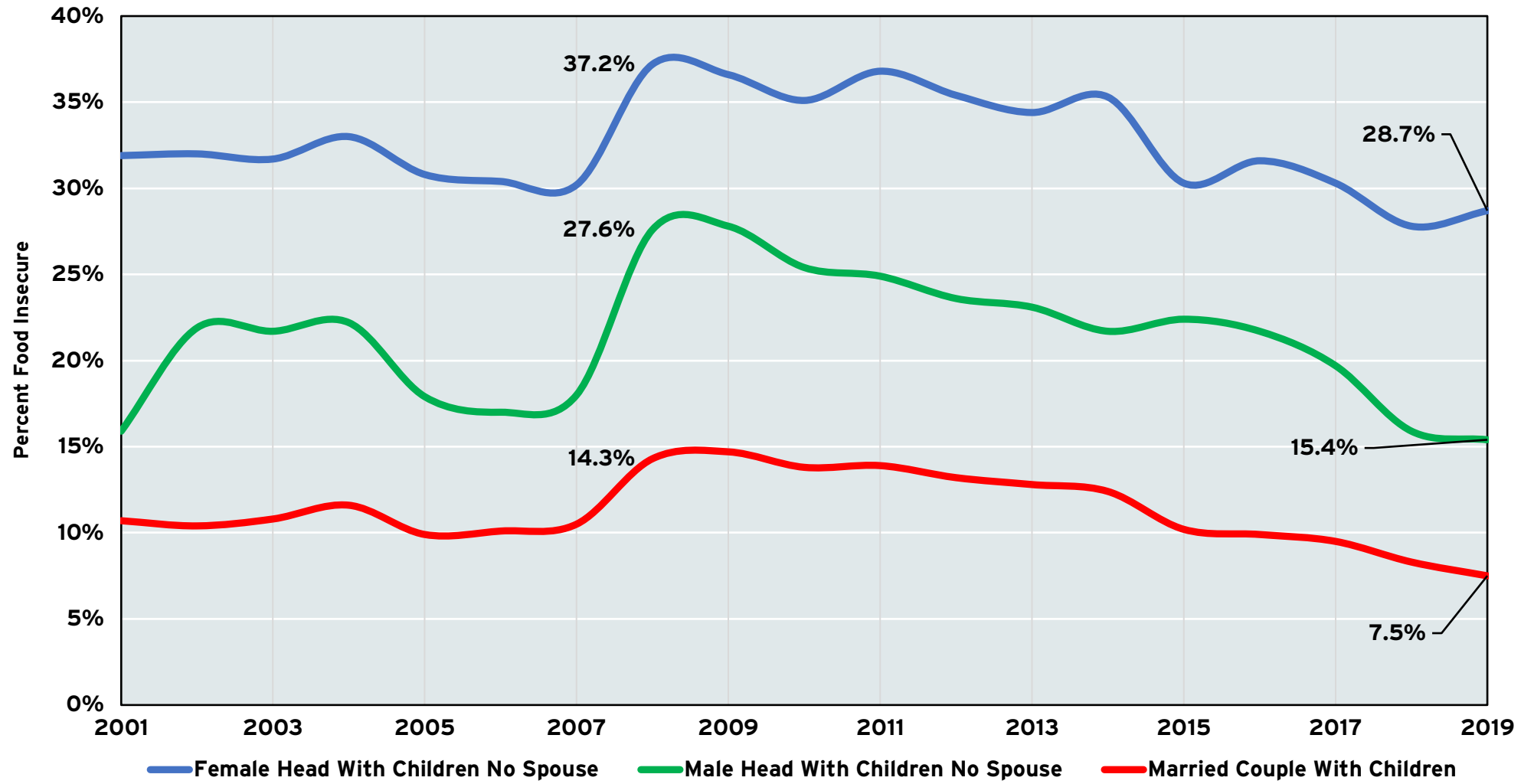
8 Colleen Heflin, Irma Arteaga and Sara Gable, "Low Income Preschooler's Non-Parental Care Experiences and Household Food Insecurity," University of Kentucky Center for Poverty Research Discussion Paper Series (2012), https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1029&context=ukcpr_papers.

9 Kelly Balistreri, "Family Structure, Work Patterns, and Time Allocations: Potential Mechanisms of Food Insecurity among Children," University of Kentucky Center for Poverty Research Discussion Paper Series (2012), https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1031&context=ukcpr_papers.

10 V. Tarasuk, A. Mitchell, L. McLaren and L. McIntyre (2013), "Chronic physical and mental health conditions among adults may increase vulnerability to household food insecurity," *The Journal of Nutrition*, 143(11), 1785-1793.

GRAPH 7

HOUSEHOLD COMPOSITION AND FOOD INSECURITY: UNITED STATES, 2001-2019



Source: U.S. Department of Agriculture, Economic Research Service

Food Insecurity In The Commonwealth

How many Virginians are food insecure? To answer that question, we rely on data from the nonprofit advocacy group Feeding America, as the U.S. Census Bureau and U.S. Department of Agriculture do not provide local-level estimates of food insecurity.¹¹ In 2018, 842,870 Commonwealth residents were food insecure, or 9.9% of the population. Of these, 233,530 were children, or 12.5% of the population under the age of 18.

Table 3 displays the variation in food insecurity across Virginia's metropolitan areas. The Blacksburg-Christiansburg metro had the highest overall food insecurity rate (11.6%), while child food insecurity was highest in the Lynchburg metro area. Not surprisingly, Northern Virginia, which has the highest levels of median income in the Commonwealth, had the lowest food insecurity rate overall (7.1%) and lowest child food insecurity rate (8.3%).

There is also substantial variation among Virginia's cities and counties. Table 4 lists selected localities with the lowest and highest food insecurity rates in the Commonwealth in 2018. The overall food insecurity rate was highest in Petersburg (20%), followed by Emporia (19%), Norton (19%), Buchanan County (18.4%) and Martinsville (17.3%). Loudoun County (3.8%) had not only the lowest food insecurity rate in Virginia, but also the second-lowest rate in the country.



¹¹ Feeding America first estimates the relationship between food insecurity and its socioeconomic characteristics at the state level. It then uses these relationships to estimate the level of food insecurity at the city and county level. For more information, see <https://www.feedingamerica.org/sites/default/files/2019-05/2017-map-the-meal-gap-full.pdf>.

TABLE 3

FOOD INSECURITY RATES: VIRGINIA METROPOLITAN AREAS, 2018

| | Food Insecurity Rate for Individuals | Child Food Insecurity Rate | Number of Food-Insecure Individuals | Number of Food-Insecure Children |
|-------------------------------------|--------------------------------------|----------------------------|-------------------------------------|----------------------------------|
| Blacksburg-Christiansburg | 11.6% | 15.1% | 18,450 | 3,760 |
| Charlottesville | 8.8% | 11.2% | 19,110 | 4,390 |
| Harrisonburg | 10.0% | 11.2% | 12,920 | 2,960 |
| Lynchburg | 11.0% | 15.8% | 28,950 | 8,060 |
| Richmond | 10.7% | 15.5% | 126,050 | 36,730 |
| Roanoke | 10.1% | 14.2% | 33,320 | 9,740 |
| Staunton | 11.1% | 15.3% | 12,050 | 3,240 |
| Virginia Beach-Norfolk-Newport News | 10.4% | 14.0% | 178,030 | 52,890 |
| Northern Virginia | 7.1% | 8.3% | 172,560 | 45,560 |
| Winchester | 9.4% | 12.0% | 9,170 | 2,760 |

Source: C. Gundersen, A. Dewey, E. Engelhard, M. Strayer and L. Lapinski, "Map the Meal Gap 2020: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2018," Feeding America, 2020

TABLE 4

LOCALITIES WITH HIGHEST AND LOWEST FOOD INSECURITY RATES: VIRGINIA, 2018

| | Food Insecurity Rate | Number of Food-Insecure People | Above 185% of Poverty Threshold | Between 130% and 185% of Poverty Threshold | Below 130% of Poverty Threshold |
|-----------------------|----------------------|--------------------------------|---------------------------------|--|---------------------------------|
| Petersburg | 20.0% | 6,360 | 0.0% | 18.5% | 81.5% |
| Emporia | 19.0% | 1,020 | 0.0% | 9.3% | 90.7% |
| Norton | 19.0% | 760 | 22.8% | 12.6% | 64.6% |
| Buchanan County | 18.4% | 4,080 | 15.9% | 16.9% | 67.2% |
| Martinsville | 17.3% | 2,260 | 19.6% | 3.1% | 77.3% |
| Loudoun County | 3.8% | 14,700 | 48.0% | 18.7% | 33.4% |
| Falls Church | 4.5% | 630 | 73.1% | 8.1% | 18.9% |
| Fairfax County | 5.4% | 61,710 | 45.2% | 15.5% | 39.3% |
| Fairfax | 5.4% | 1,290 | 38.3% | 10.3% | 51.4% |
| Prince William County | 5.6% | 25,620 | 34.7% | 18.5% | 46.8% |

Source: C. Gundersen, A. Dewey, E. Engelhard, M. Strayer and L. Lapinski, "Map the Meal Gap 2020: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2018," Feeding America, 2020

General Observations On Food Insecurity

There is no magic bullet when it comes to food insecurity. No public or private program, by itself, encompasses the range of households affected by food insecurity. The problem, however, is not insurmountable. We first need to understand the causes and consequences of food insecurity.

The first lesson may seem obvious: Food insecurity climbs during economic contractions, and the more severe the economic decline, the greater the increase in food insecurity. The converse is also true, to a point. During periods of economic growth, food insecurity falls, but it does not disappear. At no point from 1995 to 2019 did the percentage of food-insecure U.S. households fall below 10%. It seems there is a natural floor to food insecurity.

A corollary is that food insecurity is closely tied to employment. Table 5 shows the prevalence of food insecurity by employment status for 2019. Households that experienced either unemployment or part-time work due to economic reasons were much more likely to be food insecure.

The second general lesson is that a sudden family crisis can thrust a household into food insecurity. A recent report from the Foodbank of Southeastern Virginia and the Eastern Shore puts it succinctly: “Usually one or two ‘signature events,’ such as a divorce or death of a spouse, turned the clients’ lives away from their normal tracks. Afterward, a series of events following the signature event often put them into a ‘poverty spiral,’ from which they felt they were unable to deal with or escape.”¹²

These adverse life events provide some context to one of the core findings in the academic literature, which shows that income and resources are some of the strongest predictors of a household’s food security.¹³ They help illustrate that income is a big part of the story; however, the loss of income often comes in the context of a household’s story. As a household’s budget tightens, from either reduced income or increased expenses, it is forced to adjust.

¹² “Hunger and Food Insecurity: The Root Causes and Consequences” Foodbank of Southeastern Virginia and the Eastern Shore, 2019.
¹³ C. Gunderson, B. Kreider and J. Pepper (2011), “The economics of food insecurity in the United States,” *Applied Economic Perspectives and Policy*, 33(3), 281-303.

| | Percent Food Insecure | Percent Low Food Insecure | Percent Very Low Food Insecure |
|--------------------------------|-----------------------|---------------------------|--------------------------------|
| Full time | 8.1% | 5.3% | 2.8% |
| Retired | 7.2% | 4.5% | 2.7% |
| Part time, noneconomic reasons | 16.1% | 10.3% | 5.8% |
| Part time, economic reasons | 41.6% | 26.9% | 14.6% |
| Unemployed | 38.2% | 19.5% | 18.6% |
| Disabled | 44.1% | 20.4% | 23.7% |
| Not in labor force | 23.2% | 13.5% | 9.7% |

Source: Calculated by the U.S. Department of Agriculture, Economic Research Service, using Current Population Survey Food Security Supplement data, 2019

The aforementioned report on food bank clients in Hampton Roads provides data on the budget priorities of food-insecure families. **The households overwhelmingly ranked housing and utilities as their top financial priorities, with food a distant third. Skipping meals is a more tenable option than losing the roof over the family’s head. This gives us our third lesson on the causes of household food insecurity: In the face of traumatic life events, food is often not a household’s highest priority.**

Our final overarching lesson highlights a household’s ability to navigate a sudden crisis. In particular, financial management skills appear to be key to remaining food secure. However, managing scarce resources does not necessarily fall in the realm of common sense. This important skill is glossed over (or not taught at all) in many schools. A 2012 paper in *The Journal of Nutrition* found that households with greater financial

management abilities were less likely to be food insecure.¹⁴ Applying financial literacy, whereby a household employs proactive rather than reactive behavior, can help with navigating through an adverse event.

What Are The Consequences Of Food Insecurity?

It is quite challenging to measure the impacts of food insecurity. An extensive body of academic literature has shown that food insecurity is *associated with*, or in the language of statistics, *correlated with*, negative health and performance outcomes.¹⁵ Research suggests that children who are food insecure have higher levels of aggression, anxiety and cognitive problems. Adults who are food insecure have increased levels of depression and chronic health diseases, along with lower workplace productivity. Food-insecure older adults often experience poor health and have limitations in activities of daily living.

There is overwhelming associative evidence of poor outcomes from food insecurity; however, it is challenging to separate food insecurity from the myriad other challenges low-income households face, including simply being in poverty. That is, there is plenty of smoke, but we cannot see the exact source of the fire.

The Nutritional Safety Net

Federal food assistance programs work in tandem with nonprofit organizations, such as food banks and religious organizations, to create a domestic nutrition safety net. Federal food assistance programs help alleviate hunger and poor nutrition for millions by targeting low-income households along with specific vulnerable populations, such as children, older adults and pregnant or postpartum women. These programs serve as the broadest and largest portion of the safety net. The U.S. Department of

Agriculture's food and nutrition service budget for FY 2020 amounted to \$81 billion.¹⁶

However, the federal safety net does not catch all food-insecure individuals or households. According to the most recent available USDA data, in 2019, only about 58% of food-insecure households received benefits from one or more of the three largest federal food and nutrition assistance programs: Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the National School Lunch Program (NSLP). For those who fall through the federal net or need additional aid, charitable food assistance may be the only available source of support.

Across Virginia, local food banks lead this effort. These organizations not only fill in gaps from the federal safety net, but also assist households not typically seen in food bank lines, such as furloughed employees during government shutdowns. Churches, mosques, synagogues and other private organizations also work to help residents in need.

FEDERAL PROGRAMS

The federal government uses multiple programs to support household nutritional needs. Graph 8 shows the increase in food assistance from the U.S. Department of Agriculture since 1970, which rose steeply during the Great Recession, peaking at well over \$100 billion. Graph 9 provides the breakdown in USDA food assistance for the 2019 fiscal year. SNAP made up two-thirds of overall assistance, followed by NSLP and WIC at 15.3% and 5.6%, respectively. We focus our attention on these top three programs, since they make up the majority (86.2%) of federal food assistance and serve a broad range of food-insecure households. Table 6 highlights the mission, eligibility and size of these three programs.

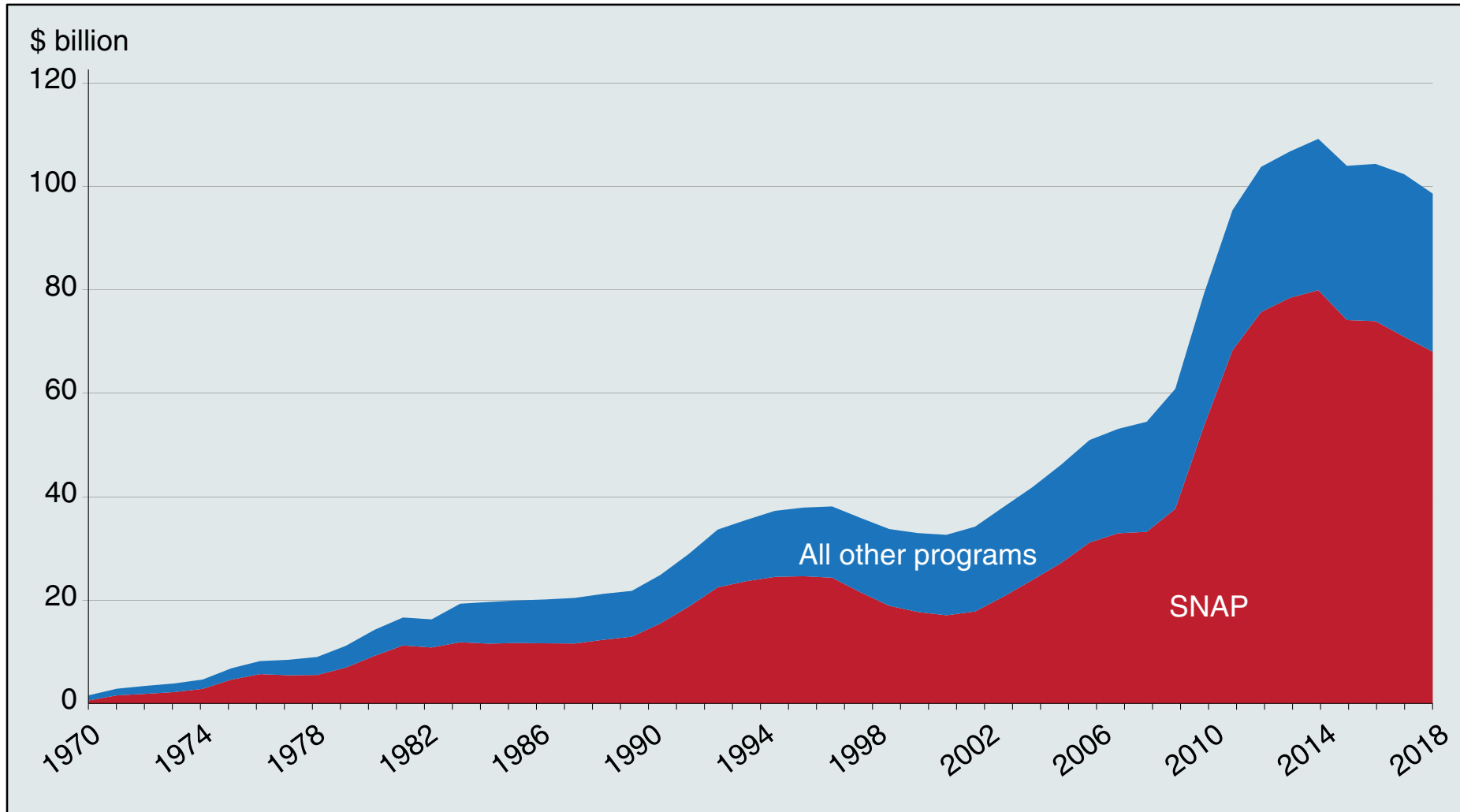
¹⁴ C.G. Gundersen and S.B. Garasky (2012), "Financial management skills are associated with food insecurity in a sample of households with children in the United States," *The Journal of Nutrition*, 142(10), 1865-1870.

¹⁵ For an overview of this academic literature see C. Gundersen, B. Kreider and J. Pepper (2011), "The economics of food insecurity in the United States," *Applied Economic Perspectives and Policy*, 33(3), 281-303.

¹⁶ <https://www.obpa.usda.gov/budsum/fy2020budsum.pdf>.

GRAPH 8

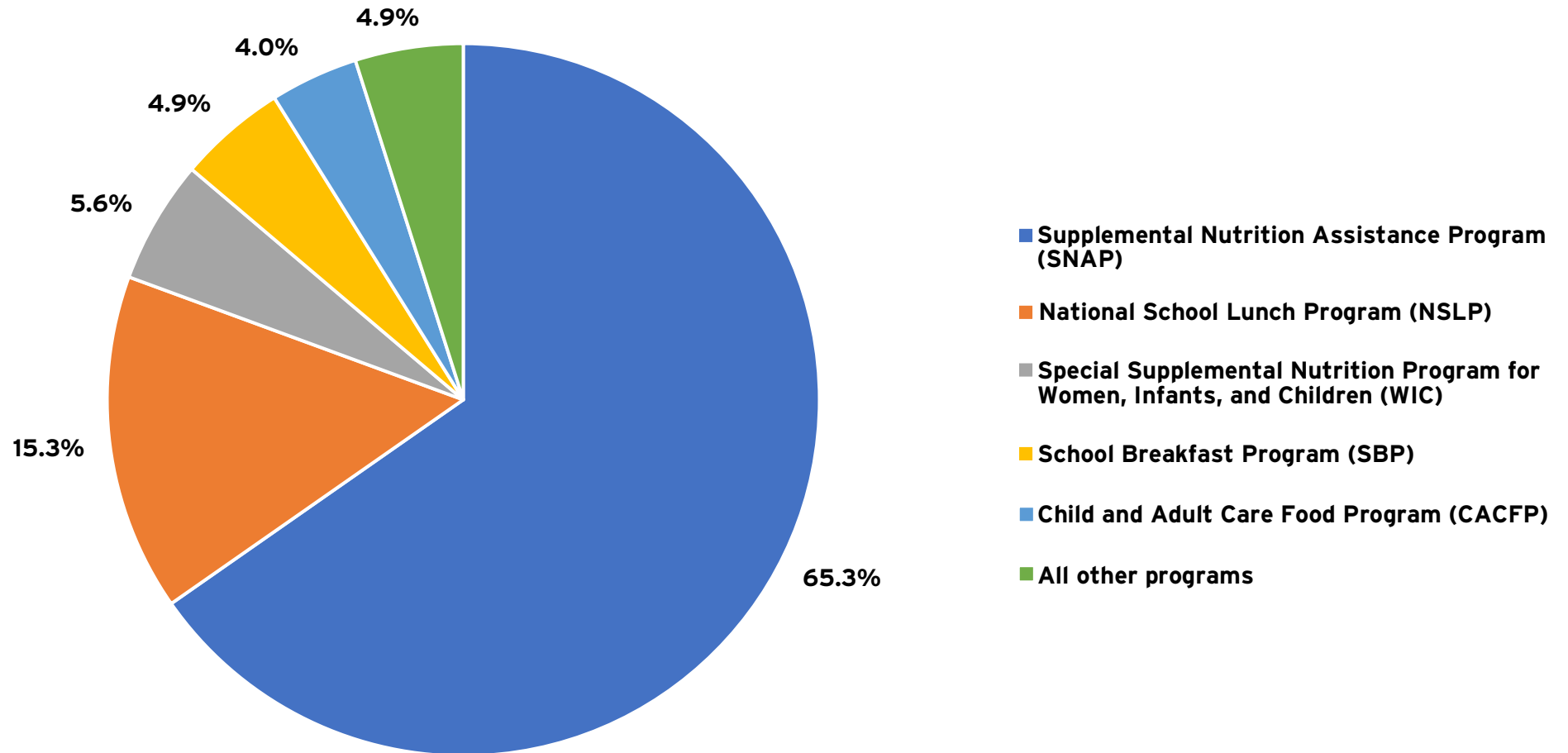
USDA EXPENDITURES FOR FOOD AND NUTRITION ASSISTANCE, FY 1970-2018



Source: U.S. Department of Agriculture, Economic Research Service, using data from USDA Food and Nutrition Service. Note: Dates are for each fiscal year, and prices are not adjusted for inflation.

GRAPH 9

USDA FOOD AND NUTRITION ASSISTANCE EXPENDITURES BY PROGRAM, FY 2019



Source: U.S. Department of Agriculture, Economic Research Service

TABLE 6

FEDERAL FOOD ASSISTANCE PROGRAM DETAILS

| Program | Stated Goal | Eligibility | 2019 Statistics |
|---|---|---|---|
| <p>Supplemental Nutrition Assistance Program (SNAP)</p> | <p>Provides “nutrition benefits to supplement the food budget of needy families so they can purchase healthy food and move towards self-sufficiency”</p> | <p>Resource and income limits, including:</p> <ul style="list-style-type: none"> Gross monthly income of 130% of poverty Net monthly income of 100% of poverty \$2,250 in countable resources (such as cash or money in a bank account) or \$3,500 for households including one member over 60 or disabled | <p>Average participation: 35,703,000</p> <p>Total benefits disbursed: \$55,621,880,000</p> <p>Total costs: \$60,355,000,000</p> |
| <p>Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)</p> | <p>Provides “supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk”</p> | <p>Women who are pregnant, postpartum and breastfeeding, along with infants, and children up to age 5</p> <p>Meet income guidelines (this is based on family size and gross income)</p> <p>Have a nutritional risk (determined by local WIC clinic)</p> | <p>Average participation: 6,400,000</p> <p>Total costs: \$5,216,600,000</p> |
| <p>National School Lunch Program (NSLP)</p> | <p>“Meal program operating in public and nonprofit private schools and residential childcare institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day.”</p> | <p>Free lunch: children in households with incomes below 130% of the poverty level or those receiving SNAP or TANF</p> <p>Reduced-price lunch: children in households with incomes between 130% and 185% of the poverty line</p> | <p>Total average participation: 29,600,000</p> <p>Total lunches served: 4,866,200,000</p> |

Source: <https://www.fns.usda.gov>

SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM

The Supplemental Nutrition Assistance Program (SNAP) provides benefits to supplement food budgets for low-income individuals and families so that they can purchase healthy food, with the goal of moving toward self-sufficiency. The SNAP program has moved from its early food stamp days, when eligible households received a book of stamps, to an EBT (electronic benefit transfer) card that is loaded each month and works like a debit card. The program varies by state and allows eligible families to apply for benefits for a certification period; however, after the certification period ends, they must recertify. The amount a household can receive is determined by income and family size. In the 2020 fiscal year, a

two-person household can receive a maximum of \$355 per month, while maximum benefits for a household of five increase to \$768 per month.¹⁷

In 2019, 1 of every 12 Virginians received monthly SNAP benefits, with the typical person receiving an average monthly benefit of \$119.23 (Table 7). SNAP participation rates varied considerably across Virginia’s metropolitan areas, ranging from 3.9% in Washington-Arlington to 10.4% in Roanoke. Residents received almost \$998 million in SNAP benefits in 2019, a figure that has risen sharply with the COVID-19 recession in 2020. In the first seven months of 2020, more than \$817 million in SNAP benefits had been dispersed to Virginia residents.

TABLE 7

AVERAGE MONTHLY SNAP PARTICIPATION AND BENEFITS: VIRGINIA AND VIRGINIA METROPOLITAN AREAS, 2019

| | 2019 Population | Average Monthly SNAP Participation | Average Monthly SNAP Benefits Paid | Average SNAP Benefits Per Person | Average Monthly SNAP Participation Rate |
|----------------------|-----------------|------------------------------------|------------------------------------|----------------------------------|---|
| Blacksburg | 167,531 | 12,898 | \$1,456,345 | \$112.92 | 7.7% |
| Charlottesville | 218,615 | 12,650 | \$1,431,743 | \$113.18 | 5.8% |
| Harrisonburg | 134,964 | 7,843 | \$831,884 | \$106.07 | 5.8% |
| Lynchburg | 263,566 | 26,355 | \$2,946,359 | \$111.80 | 10.0% |
| Richmond | 1,291,900 | 125,206 | \$15,892,307 | \$126.93 | 9.7% |
| Roanoke | 313,222 | 32,725 | \$3,757,062 | \$114.81 | 10.4% |
| Staunton | 123,120 | 9,792 | \$1,075,611 | \$109.84 | 8.0% |
| Hampton Roads | 1,718,709 | 174,717 | \$21,654,093 | \$123.94 | 10.2% |
| Washington-Arlington | 3,042,248 | 119,509 | \$14,342,984 | \$120.02 | 3.9% |
| Winchester | 117,391 | 7,551 | \$898,155 | \$118.95 | 6.4% |
| Virginia | 8,535,519 | 697,173 | \$83,126,384 | \$119.23 | 8.2% |

Sources: 2019 population estimates from the U.S. Census Bureau; SNAP participation and benefits data from the Virginia Department of Social Services. Virginia portion of each metropolitan area.

¹⁷ <https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-and-benefits>.

SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) was created in the early 1970s and is widely recognized as a safeguard for low-income women and children who are nutritionally at risk. Specifically, WIC provides resources for low-income pregnant women, postpartum mothers, infants and children up to age 5. These vulnerable groups receive nutritious foods, nutrition education and counseling, along with referrals for health care and social services. WIC is a federally funded program but is operated through local clinics by state WIC agencies.

Applicants for WIC resources must demonstrate a need. Eligible participants must have a household income below 185% of the federal poverty line or be deemed income-eligible based on participation in other federal programs. Furthermore, WIC participants must demonstrate nutritional risk (e.g., anemia, weight loss) in an assessment conducted by a health care professional.

WIC food packages are the program's primary means of nutritional support. Similar to SNAP, WIC participants use an EBT card to shop at authorized grocery stores and other WIC-approved vendors. WIC-approved food items include a wide range of fruits, vegetables and whole grains and are designated with a blue WIC sign in many grocery stores. The program guarantees participants specific amounts of certain foods, such as a dozen eggs and 36 ounces of approved breakfast cereal a month. On the other hand, for some items, such as fruits and vegetables, there is a maximum dollar value the program covers. WIC pays for \$11 worth of fruits and vegetables a month for pregnant women.¹⁸

NATIONAL SCHOOL LUNCH PROGRAM

The U.S. Department of Agriculture partners with state agencies to provide the National School Lunch Program (NSLP), the nation's second-largest food and nutrition assistance program. It offers every student the opportunity to receive a healthy lunch, serving on average 30 million children a day, with over 90% of all public and nonprofit private schools participating. Children are eligible for either a free or reduced-price lunch based on their household income. In addition to these meals during the school year, students in low-income areas are able to receive meals during the summer from the Summer Food Service Program (SFSP), also known as the Summer Meals Program. Also administered by the USDA, the Summer Meals Program is federally funded and reimburses providers that serve meals to children and teens during the summer.¹⁹

In the 2019-2020 school year, 45.6% of students in Virginia's public and nonprofit private schools were eligible for free or reduced-price meals at school (Table 8). In most of Virginia's metropolitan areas, about half of all students are eligible for free or reduced-price meals. Approximately 56.8% of students in the Harrisonburg metro area were eligible for free or reduced-price meals, the highest of all Virginia's metros, while the Washington, D.C., metro area exhibited the lowest rate, 37.5%. With the closure of schools due to the COVID-19 pandemic, this part of the safety net was strained, but school administrators, staff and teachers expended considerable effort to adapt to trying circumstances.

¹⁸ <https://www.fns.usda.gov/wic/wic-food-packages>.

¹⁹ U.S. Department of Agriculture, Food and Nutrition Service, SFSP, 2020.

TABLE 8

STUDENT NUTRITION PROGRAM MEMBERSHIP AND FREE/REDUCED-PRICE MEALS FOR ELIGIBLE STUDENTS:
VIRGINIA METROPOLITAN AREA PUBLIC SCHOOLS, 2019-2020

| | Student Nutritional Program Membership | Free Meal-Eligible Students | Reduced Price-Eligible Students | Total Free and Reduced Price-Eligible Students | Percentage of Students Eligible for Free or Reduced-Price Meals |
|-------------------------------|--|-----------------------------|---------------------------------|--|---|
| Blacksburg-Christiansburg | 18,272 | 7,377 | 918 | 8,295 | 48.8% |
| Charlottesville | 27,590 | 9,159 | 1,265 | 10,424 | 42.7% |
| Harrisonburg | 18,379 | 8,293 | 1,275 | 9,568 | 56.8% |
| Lynchburg | 32,195 | 16,214 | 1,705 | 17,919 | 55.1% |
| Richmond | 194,488 | 87,296 | 7,378 | 94,674 | 54.2% |
| Roanoke | 43,926 | 22,936 | 1,606 | 24,542 | 50.4% |
| Staunton | 16,175 | 6,564 | 982 | 7,546 | 53.1% |
| Hampton Roads | 258,995 | 118,291 | 13,203 | 131,494 | 47.1% |
| Washington, D.C. | 510,139 | 141,696 | 29,244 | 170,940 | 37.5% |
| Winchester | 18,412 | 6,826 | 1,099 | 7,925 | 51.5% |
| Virginia Public Schools Total | 1,294,730 | 525,711 | 67,841 | 590,252 | 45.6% |

Source: Virginia Department of Education, Office of School Nutritional Programs, 2019-2020 Free and Reduced Eligibility Report, June 2020

RIGIDITIES IN DELIVERY

The goal of each federal food assistance program is to target aid to disadvantaged populations. Nonetheless, there is a tension between aiding those that do not actually need it and failing to aid those that do. This tension is one reason why programs use “means tests,” where participants must show their need based on the eligibility threshold. The eligibility threshold is often based on where the household’s income falls relative to the federal poverty line, while WIC applicants must also show nutritional risk.

There are drawbacks to means testing. The most notable is what is referred to as the “benefits cliff.” As a household’s income increases and goes above the eligibility threshold, its benefits fall, metaphorically akin to dropping off a cliff. When a household’s income rises, it typically does

not increase enough to weather the subsequent drop in benefits. This can create some perverse incentives. In the case of workplace mobility, workers might be reluctant (or refuse) to take a promotion because they could jump the income threshold and fall off the benefits cliff.

Recent research has pointed to several other challenges that eligible households face due to the rigidity of each program.²⁰ These challenges help to explain the low take-up rates of food assistance programs among eligible households. For instance, the eligibility rules for the programs can be complicated – the application forms are long and require substantial documentation – and participants in the WIC program must travel to WIC clinics. This requires transportation to and from a clinic as well as time away from work. Unfortunately, these barriers often hurt those with the highest needs.

²⁰ A. Finkelstein and M.J. Notowidigdo (2019), “Take-up and targeting: Experimental evidence from SNAP,” *The Quarterly Journal of Economics*, 134(3), 1505-1556.

Filling In The Gap: Nonprofit Food Assistance Programs

Programs administered by the federal government serve as the first line of defense in the fight against food insecurity. However, local food assistance from the nonprofit sector provides a valuable additional layer to the nutritional safety net that is less rigid and can more easily accommodate individual or household circumstances. Seven Feeding America-affiliated food banks serve Virginia and contribute tremendously to the well-being and care of families in a number of surrounding communities struggling with food insecurity. Table 9 shows the food banks serving each of Virginia’s metropolitan areas. While each food bank serves a specific set of cities and counties in Virginia, the geographical area each food bank covers does not perfectly align with metropolitan area boundaries. The Blue Ridge Area Food Bank, for example, covers the Charlottesville, Harrisonburg and Winchester metro areas, as well as several cities and counties in the Lynchburg and Washington-Arlington-Alexandria metros.

Table 10 displays the top food banks serving Virginia based on the number of meals served per year. Two of the largest organizations are the Capital Area Food Bank (founded in 1979) and Feed More (established in 1967). The former serves the Washington-Arlington-Alexandria metro area and the latter serves the Richmond metro area. While the Capital Area Food Bank serves several cities and counties in Northern Virginia, it also serves all of Washington, D.C. Feed More, located in Richmond, distributes more than 25 million meals a year. Feeding America estimates that, on average, Virginia-based food banks distribute more than 120 million meals a year.

These organizations partner with local city outreach programs to help food-insecure adults, families and children. Table 11 provides some details on programs offered by two of the largest food banks in terms of meals served. The food banks share in providing after-school meals to children, as well as food for them during the summer months, and ensuring that struggling households in their communities have access to healthy foods. The Weekend Bags Program seeks to augment the federal NSLP by providing food-insecure children with bags, or backpacks, filled with food that they take home on weekends. The program relies on school personnel

to identify children in need and distribute food discreetly to them before the weekend to minimize stigma. Some programs, however, are unique to each area. For example, Capital Area Food Bank’s Senior Brown Bag program delivers healthy meals to older adults with limited mobility. The program targets citizens over 55 years of age and delivers monthly meal packages to residents in assisted living centers.

TABLE 9

FEEDING AMERICA FOOD BANKS SERVING VIRGINIA'S METROPOLITAN AREAS, 2018

| Metropolitan Area | Food Banks |
|---|---|
| Blacksburg-Christiansburg | Feeding Southwest Virginia Capital Area Food Bank ¹ |
| Charlottesville | Blue Ridge Area Food Bank |
| Harrisonburg | Blue Ridge Area Food Bank |
| Lynchburg | Blue Ridge Area Food Bank Feeding Southwest Virginia ² |
| Richmond | Feed More Foodbank of Southeastern Virginia and the Eastern Shore ³ |
| Roanoke | Feeding Southwest Virginia |
| Staunton | Blue Ridge Area Food Bank |
| Virginia Beach-Norfolk- Newport News | Foodbank of Southeastern Virginia and the Eastern Shore Virginia Peninsula Foodbank |
| Washington-Arlington-Alexandria | Capital Area Food Bank Blue Ridge Area Food Bank Fredericksburg Regional Food Bank ⁴ |
| Winchester | Blue Ridge Area Food Bank |

Sources: Feeding America, 2020, and the Dragas Center for Economic Analysis and Policy, Old Dominion University
¹ Montgomery County, ² Bedford County, ³ Sussex County, ⁴ Spotsylvania, Stafford, Fredericksburg

Breaking down the revenues of selected Virginia food banks illustrates the source of food aid in the state (Table 12). While local food banks conduct fundraisers and food drives, they rely primarily on receiving food donations from larger corporations. Donated food makes up over 70% of the revenues for each agency. For example, some of Feed More’s top donors include Walmart, Target, Trader Joe’s, Publix and Kroger.

TABLE 10

ESTIMATED ANNUAL AVERAGE DISTRIBUTION OF MEALS BY FOOD BANKS SERVING VIRGINIA

| Food Banks | Meals Served per Year |
|---|-----------------------|
| Capital Area Food Bank | 33,772,604 |
| Feed More | 25,224,963 |
| Blue Ridge Area Food Bank | 23,008,363 |
| Feeding Southwest Virginia | 15,267,162 |
| Foodbank of Southeastern Virginia and the Eastern Shore | 14,518,062 |
| Virginia Peninsula Foodbank | 10,209,141 |
| Fredericksburg Regional Food Bank | 3,576,866 |

Source: Feeding America provides estimates of annual average meals distributed to clients for its partner food banks throughout Virginia and the United States. For more information about your local food bank, see <https://www.feedingamerica.org/find-your-local-foodbank>.

TABLE 11

CAPITAL AREA FOOD BANK AND FEED MORE PROGRAMS

| Capital Area Food Bank | Shared Programs | Feed More |
|------------------------|---|----------------------|
| Brighter Bites | Weekend Bags/Backpacks | Distribution Network |
| Community Marketplaces | Commodity Supplemental Food Program | Hunger Hotline |
| Joyful Food Market | Mobile Pantry/Markets | Meals on Wheels |
| Mobile Food Program | Emergency Food Assistance Program | |
| Senior Brown Bag | After School Meals Program (Kids Café) | |
| | Summer Food Service Program (Kids Summer Meals Program) | |
| | Family Markets (School Market Program) | |

Sources: <https://feedmore.org/how-we-help/> and <https://www.capitalareafoodbank.org/what-we-do/direct-food-distribution-programs/>

TABLE 12

SELECTED VIRGINIA FOOD BANKS: SELECTED COMPONENTS OF REVENUE, FY 2019

| Revenue Source | Capital Area Food Bank | Feed More | Blue Ridge Area Food Bank |
|--------------------------------------|------------------------|----------------------|---------------------------|
| Donated Food | \$ 51,385,790 | \$46,637,809 | \$ 41,405,721 |
| Contributions and Non-Federal Grants | \$ 14,168,848 | \$6,728,078 | \$ 7,255,405 |
| Program Fees | \$ 2,442,309 | \$ 1,173,990 | \$917,070 |
| Government Grants | \$ 4,584,498 | \$ 267,406 | \$999,226 |
| Total* | \$ 73,114,663 | \$ 61,192,293 | \$ 50,943,248 |

Sources: Capital Area Food Bank Financial Statement FY 2019, Feed More Financial Statement FY 2019 and Blue Ridge Area Food Bank Inc. Financial Report FY 2019. *Columns do not add to total due to omitted revenue sources; full totals found in annual reports.

COVID-19 And Food Insecurity: A New Challenge Arises

The COVID-19 pandemic has produced wide-ranging impacts on public health and the economy. Business closures and social distancing to limit the spread of the coronavirus have also resulted in lost jobs and income, making it challenging for many households to afford food. Local food banks saw a surge in demand along with a change in the makeup of their clients. COVID-19 has been responsible for bringing many households to the food bank lines for the first time. This has put a considerable strain on both the federal and nonprofit nutritional safety nets.

The federal government food assistance response to COVID-19 has been relegated to modifying existing programs, such as SNAP. The Families First Coronavirus Response Act (FFCRA), signed into law March 18, 2020, allows states to modify administrative procedures to help more households participate in SNAP as well as temporarily increase benefits to many in need. Virginia was an early adopter of the waivers in the FFCRA. The Commonwealth extended the certification period to minimize lapses in household benefits due to administrative oversight, adopted telephonic signatures and adjusted interview requirements for applicants to receive benefits.

The FFCRA also offered two options for states to increase benefits for many households experiencing falling income and rising food needs. **Virginia took advantage of both opportunities, by allowing SNAP participants to receive emergency allotments, the maximum benefit a household can receive, and “Pandemic EBT” for households with children who no longer receive free or reduced-price meals due to school closures.**

Food insecurity rates are projected to continue rising as a result of the COVID-19 pandemic. The surge in unemployment from business closures and associated social distancing measures created a spike in demand for food assistance. The number of individuals receiving SNAP benefits in Virginia jumped from 687,984 in March 2020 to 746,608 in April 2020, an increase of 8.5%. In July 2020, 785,411 Virginians received SNAP benefits.²¹ Between March and June of 2020, approximately 40% of Americans going to food banks were first-time visitors.²²

In May 2020, the nonprofit Feeding America projected that the national food insecurity rate would increase by as little as 1% in the most optimistic scenario and as much as 5.2% in the most pessimistic scenario.²³ States and localities with the highest rates of food insecurity prior to the pandemic were projected to have the largest increases in food insecurity during the pandemic. Why? Food insecurity is persistent and rises rapidly when economic conditions deteriorate. States and localities that had relatively high prepandemic rates were economically fragile and would thus experience rapid increases as economic conditions deteriorated with the onset of lockdowns and social distancing measures. While the nation, for now, appears to have avoided the worst-case scenario, where the annual unemployment rate reached 11.5%, food insecurity has clearly increased across the nation and in the Commonwealth.

Nonprofits have also had to adjust to the surge in demand for their services while their resources have diminished. Indeed, COVID-19 has been challenging to food bank clients and donors. Food banks are seeing reductions in household and corporate donations as well as a decline in food donations from grocery stores. **The food donation reductions have increased the cost of providing a meal. According to the Foodbank of Southeastern Virginia and the Eastern Shore, its cost per meal ballooned from \$0.40 prior to COVID-19 to \$3.50.²⁴ Increased demands and increased costs have resulted, in some cases, in unmet needs.**

21 Virginia Department of Social Services, https://www.dss.virginia.gov/geninfo/reports/financial_assistance/fs.cgi.

22 Feeding America 2020, <https://www.feedingamerica.org/take-action/coronavirus>.

23 Feeding America, “The Impact of Coronavirus on Local Food Insecurity,” May 19, 2020, https://www.feedingamerica.org/sites/default/files/2020-05/Brief_Local%20Impact_5.19.2020.pdf.

24 “Hampton Roads food banks see surge in demand, drop in donations,” *The Virginian-Pilot*, April 7, 2020.

Final Thoughts

Food insecurity is not always something that happens to “someone else.” One in 10 Virginians reported food-insecure conditions in 2018. Food insecurity disproportionately affects children, households led by women and households of color. The COVID-19 economic crisis has already impacted the demand for public and private food assistance services and, if history is any guide, the recovery from this recession will be slow.

Food insecurity also can spawn a public health crisis. It has been associated with poor health outcomes for children and adults, and it should be factored into the larger conversation about how to maintain the overall health of a community. Food banks and nonprofits have served as front-line support during the pandemic, and they have been agile in adapting to the growing demand. However, they need more help to continue to meet the needs of food-insecure households. While food banks are doing incredible work, they still need support from the local, state and federal governments to help families as the nation continues to deal with this pandemic.

What, then, can be done?

On a personal level, donate to a local food bank or organization that helps improve food security. Food banks are very efficient in turning monetary donations into food assistance. Simply put, the return on investment per dollar donated is relatively high. Donate time and allow employees to volunteer at a local food bank or similar organization while on the clock. This simple investment of time and resources multiplies the impact of food donations.

Invest in financial literacy. The research is clear: Households need tools to manage their resources. Improving financial literacy and management shifts the dynamic in a household from reacting to financial events to preparing for unforeseen circumstances. Improving financial literacy increases economic resiliency, which, in turn, can lower downstream demands on food banks and public programs. However, the need for financial literacy is often realized after the fact – that is, only after one is in financial peril. We recommend incorporating financial literacy in

the middle school and high school curricula. **If personal health is a core subject, then financial health also should be one.**

Prioritize K-12 education. It should go without saying that a region without good schools is at a comparative disadvantage when trying to attract new investment and residents. Working to align schools with the needs of employers is only one part of the equation. It is important to recognize that schools play a key role in child nutrition and, in many cases, provide the only guaranteed meal for some families. Long-term investments in education not only improve employment outcomes for students, but also are a smart investment for businesses and leaders seeking to promote economic development. However, without strong nutritional programs, some students will go hungry and fail to achieve their full potential. **Given the strong and clear linkages between student outcomes and food security, continued efforts to incorporate and improve food security through the school system are not only laudable, but a necessity in times of economic uncertainty.**

We live in challenging times. It is our choice whether to withdraw, disengage, fracture into smaller groups or come together. Improving the lot of the least fortunate benefits us all. Together, let us rise to the challenge.

YOUTH MENTAL HEALTH IN VIRGINIA

*Just because you don't understand it doesn't
mean it isn't so.*

- Lemony Snicket, "The Blank Book"



Growing up has never been easy. Over the last decade, however, schools and medical health professionals have reported a significant increase in the number of young people experiencing depression or anxiety, engaging in self-harm, struggling with substance abuse and engaging in or being the targets of cyberbullying. The COVID-19 pandemic and restrictions on in-person instruction, athletics and other forms of social interaction have increased the sense of isolation for some of Virginia's youth.

A 2019 Pew Research Center study found that more young people, particularly teenagers, reported being anxious or depressed. Seven out of 10 teenagers in the study identified anxiety and depression as major problems among their peers.¹ Data from the National Survey on Drug Use and Health (NSDUH) reflected the increasing percentage of adolescents (ages 12-17) who experienced a major depressive episode (MDE) in the past year.² In 2009, 8.1% of adolescents had at least one MDE. By 2019, however, 15.7% of adolescents had experienced at least one MDE. The rise in depression among adolescent girls has been even sharper, increasing from 11.7% in 2009 to 23% in 2019. Girls were nearly three times more likely to report symptoms of depression than boys in 2019.

1 2019 Pew Research Center study, available at: <https://www.pewsocialtrends.org/2019/02/20/most-u-s-teens-see-anxiety-and-depression-as-a-major-problem-among-their-peers/>.

2 SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2004-2019, available at: <https://www.samhsa.gov/data/sites/default/files/reports/rpt29394/NSDUHDetailedTabs2019/NSDUHDetTabsSect11pe2019.htm>.

Even more troubling, the rise in adolescent depression correlates with a striking rise in suicides. Suicide rates for adolescents and young adults increased from 2000 to 2017; the fastest climb occurred among 10- to 14-year-olds (Graph 1). From 2000 to 2011, the suicide rate for 10- to 14-year-olds was below that of 15- to 19-year-olds and 20- to 24-year-olds. From 2012 to 2017 (the latest available data), however, the number of suicides grew more quickly among children ages 10-14. In 2012, the suicide rate was 1.4 per 100,000 among 10- to 14-year-olds, 8.3 per 100,000 among 15- to 19-year-olds and 13.6 per 100,000 among 20- to 24-year-olds. By 2017, these rates had climbed to 2.5, 11.8 and 17.0, respectively. Suicide is now the second-leading cause of death (behind accidents) for people ages 10-24.

The COVID-19 pandemic has placed additional stressors on the youth of America and Virginia. Mental Health America (MHA), a nonprofit organization focused on mental health issues, reported that the number of young people ages 11-17 accessing the MHA Online Screening Program increased 9% from 2019 to 2020.³ In Virginia, the nonprofit Voices for Virginia's Children estimates that 130,000 children and adolescents in the Commonwealth live with a serious mental illness.⁴ Children's Hospital of The King's Daughters (CHKD) in Norfolk is Virginia's only freestanding children's hospital and home of the state's only Level I pediatric surgery program. In 2015, CHKD had 3,556 encounters (visits or consultations) with children for mental health concerns, a number that rose steadily over the ensuing years. In 2020, CHKD budgeted for 25,900 encounters (Graph 2). **The rapid increase in youth mental health visits and consultations at CHKD should be a warning signal, as we have yet to see the full effects of the COVID-19 pandemic on youth mental health.**

In this chapter, we explore the state of youth mental health and mental health care in Virginia and the United States. We begin by looking at how Virginia compares to other parts of the country, both with respect to the well-being of our children and the accessibility of care. We also report on available resources in the Commonwealth. Finally, we discuss the effects of COVID-19 on the mental health of Virginia's youth.

HOW TO FIND HELP

National Suicide Prevention Hotline: Call 1-800-273-8255 (TALK)

Suicide Prevention Lifeline: (800) 273-TALK or (800) SUICIDE

Text 741741 in a mental health crisis. The opening message can say anything. A trained crisis counselor volunteer will respond to the text. If your child is in danger of hurting themselves or others, and you are not sure what to do, call 911 or go to the nearest emergency department immediately.

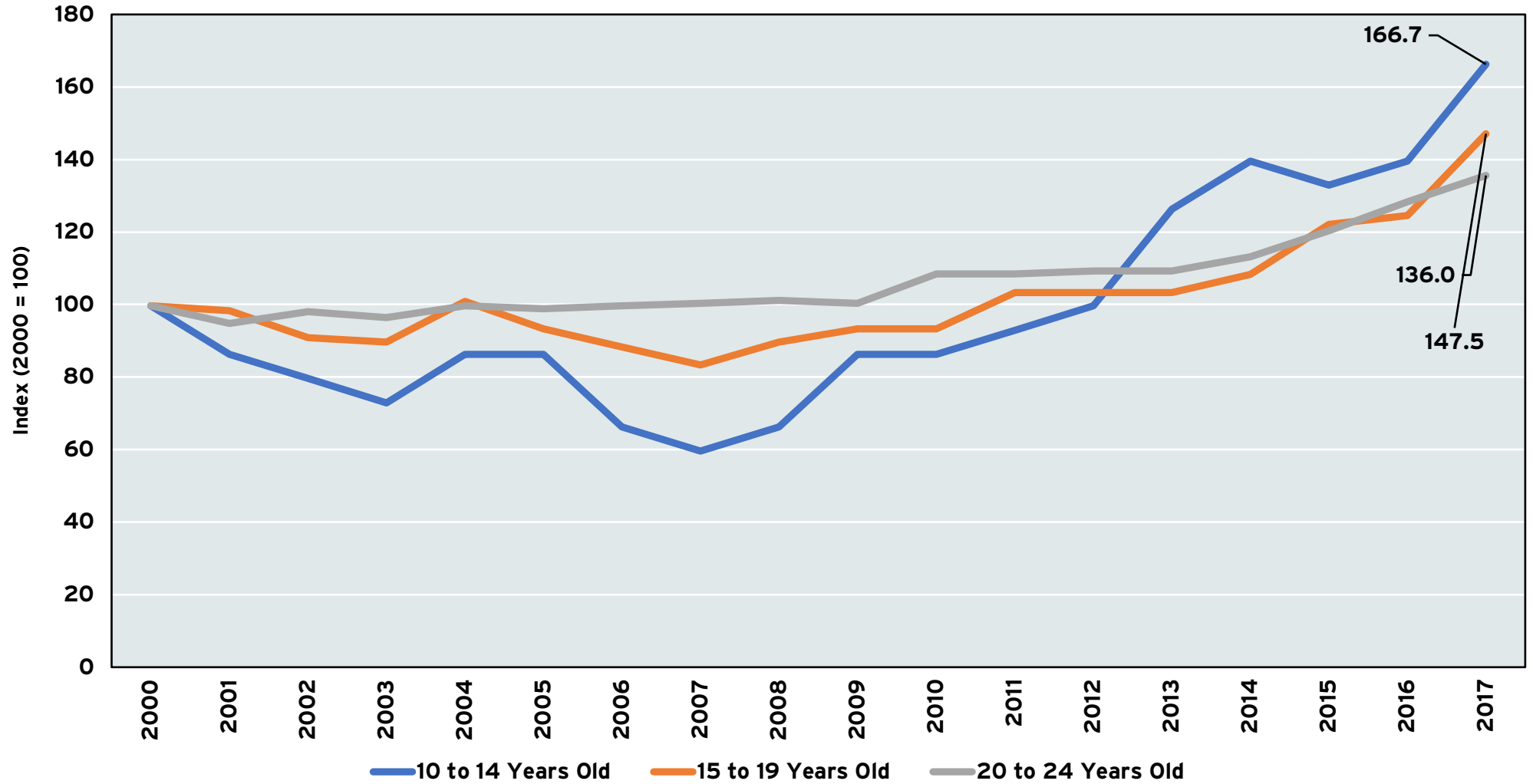


³ Mental Health America, "COVID-19 and Mental Health: A Growing Crisis," available at: <https://mhanational.org/sites/default/files/Spotlight%202021%20-%20COVID-19%20and%20Mental%20Health.pdf>.

⁴ Children's Mental Health in Virginia, Voices for Virginia's Children, available at: <https://vakids.org/our-work/mental-health>.

GRAPH 1

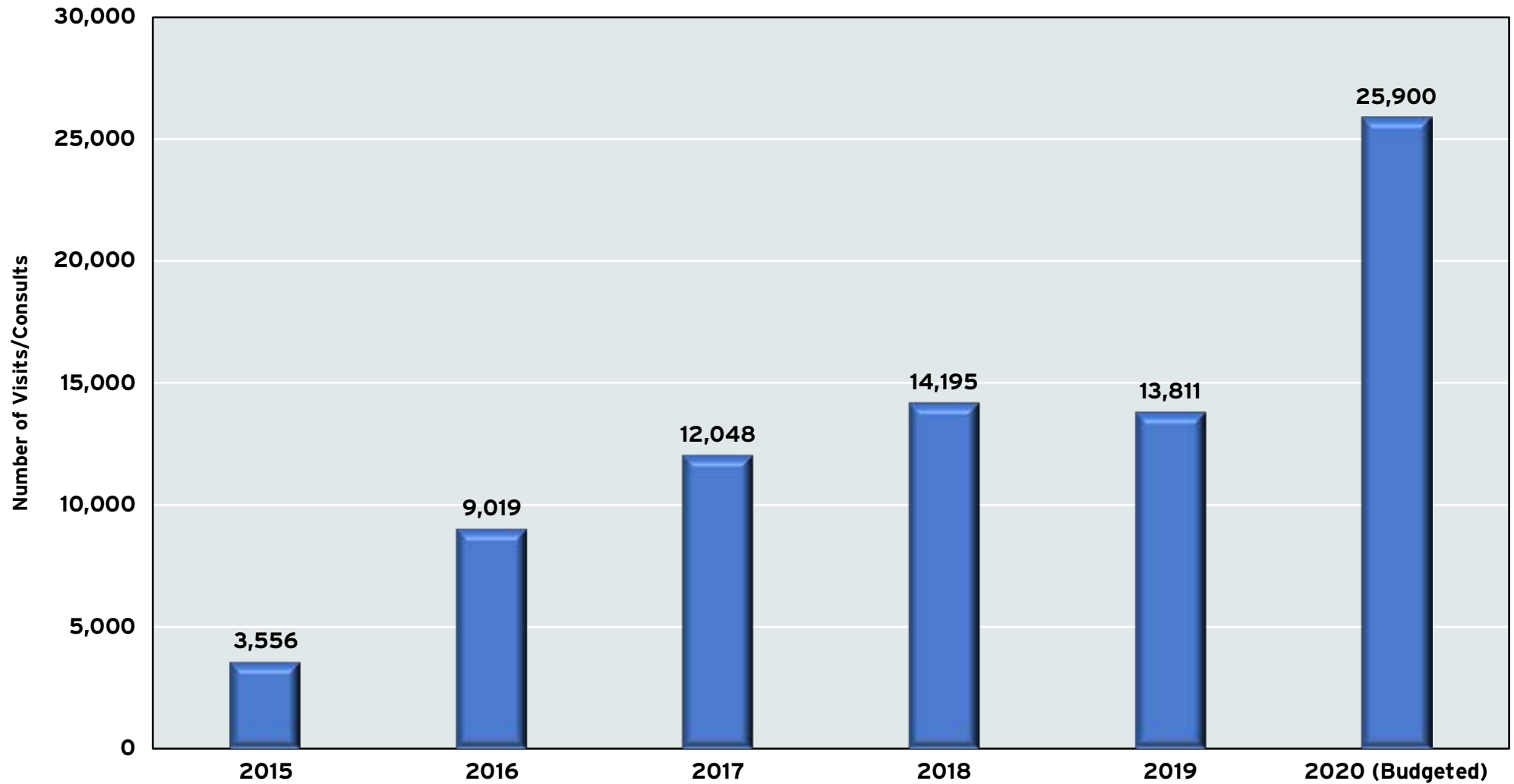
INDEX OF SUICIDES FOR ADOLESCENTS AND YOUNG ADULTS:
UNITED STATES, 2000-2017



Source: National Center for Health Statistics, <https://www.cdc.gov/nchs/data/databriefs/db352-h.pdf>

GRAPH 2

NUMBER OF VISITS OR CONSULTATIONS FOR CHILDREN'S MENTAL HEALTH CONCERNS:
CHKD, FISCAL YEARS 2015-2020



Source: Children's Hospital of The King's Daughters, Norfolk (2020)

Should We Blame The Phones Or Parents?

Experts cannot say exactly what is causing such distress among the nation's youth, although anxiety about school, peer pressure and access to drugs and firearms are sometimes mentioned as contributing factors. A recent cover story in *The Atlantic* frames the crisis of youth mental health – in particular, anxiety – as a problem of modern parenting, suggesting that “the everyday efforts we make to prevent kids’ distress – minimizing things that worry or scare them, assisting with difficult tasks rather than letting them struggle – may not help them manage it in the long term.”⁵ Left unsaid is that rising income inequality and social stratification may lead some parents to the conclusion that they must “bulldoze” a path in front of their children to increase their likelihood of success in an increasingly competitive economic environment.

There is broad consensus that the hyperconnectedness of today's teenagers, particularly via social media, plays some part in this puzzle. This case is made most strongly by San Diego State University professor of psychology Jean Twenge, who notes that “teens today spend less time with friends and more time communicating electronically, which study after study has found is associated with mental health issues.” In fact, Twenge links the abrupt shift in teen behaviors to the historical moment, around 2012, when the proportion of Americans who owned a smartphone surpassed 50%. Further, she notes that the expanding mental health crisis began at a time of strong economic growth and low unemployment, although it is more typical for mental and economic stress to go hand in hand.⁶

Not all youth who require mental health services are clinically depressed or suicidal. One in six youths between the ages of 6 and 17 experience a mental health disorder each year.⁷ Indeed, according to data from the National Health Interview Survey (NHIS), the percentage of children,

ages 4-17, who have been reported by a parent to have serious difficulties with emotions, concentration, behavior or getting along with other people held remarkably constant from 2007 to 2017, hovering between 5.1% and 6%. The range for children reported as having “minor” difficulties fluctuated between 13% and 16.1%. The figures tend to be a few points higher for boys than for girls and for all children living below the poverty line. The most frequently diagnosed mental health disorders in children are attention-deficit/hyperactivity disorder (ADHD), anxiety and other behavior disorders such as autism spectrum disorder (ASD) and oppositional defiant disorder (ODD).⁸ Diagnosis does not necessarily equate to treatment, however, as families must navigate insurance requirements, significant variations in the availability of qualified therapists and, of course, the financial cost of care.

Mental Health In Virginia: How Are We Doing?

For the past seven years, the nonprofit organization Mental Health America has compiled a set of data indicators that evaluates the state of youth and adult mental health, including access to care, in all 50 states and the District of Columbia. The 2021 State of Mental Health in America Report uses data from 2017 and 2018. Let's examine how Virginia fares relative to other states concerning youth (ages 12-17) mental health.

While Virginia appears to fare reasonably well compared to other states, ranking 20 out of 51, there is not much to brag about in the data (Table 1). Over 14% of Virginians ages 12-17 suffered at least one major depressive episode (MDE) in the past year and 10.2% coped with a severe MDE. A diagnosis was no guarantee of treatment. Over half of those experiencing an MDE did not receive any form of treatment. Among those with the most severe forms of depression, only 26.1% received some type of consistent care.

5 Kate Julian, “What Happened to American Childhood?” *The Atlantic* (May 2020), available at: <https://www.theatlantic.com/magazine/archive/2020/05/childhood-in-an-anxious-age/609079/>.

6 Jean Twenge, “Have Smartphones Destroyed a Generation?” *The Atlantic* (September 2017), available at: <https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/>; and Jean Twenge, “The Mental Health Crisis among America's Youth Is Real – and Staggering,” *The Conversation* (March 14, 2019), available at: <https://theconversation.com/the-mental-health-crisis-among-americas-youth-is-real-and-staggering-113239>.

7 National Alliance on Mental Health (NAMI), *Mental Health by the Numbers*, 2020, available at: <https://www.nami.org/mhstats>.

8 Centers for Disease Control and Prevention, *Data and Statistics on Children's Mental Health*, 2020, available at: <https://www.cdc.gov/childrensmentalhealth/data.html> and <https://www.cdc.gov/childrensmentalhealth/symptoms.html>.

TABLE 1
VIRGINIA'S MENTAL HEALTH RANKING:
YOUTH (AGES 12-17), 2017-2018

| Indicator | Percentage | Ranking |
|---|------------|-----------|
| Youth with at least one major depressive episode (MDE) in the past year | 14.3% | 27 |
| Youth with severe MDE in the past year | 10.2% | 30 |
| Youth with substance use disorder in the past year | 3.6% | 10 |
| Youth with MDE who did not receive mental health services | 53% | 12 |
| Youth with severe MDE who received some consistent treatment (7 to 25+ visits a year) | 26.1% | 34 |
| Youth with private insurance that did not cover mental or emotional problems | 6.6% | 19 |
| Youth identified with emotional disturbance for an Individualized Education Program (IEP), per 1,000 students | 8.4% | 23 |
| Overall youth ranking | - | 20 |

Source: 2021 State of Mental Health in America Report, Mental Health America, <https://mhanational.org/issues/2021/mental-health-america-youth-data>

Some caveats are in order. First, as previously noted, youth mental health everywhere in the United States has worsened in the past decade, the comparative rankings notwithstanding. Second, there is a significant discrepancy between Virginia’s youth and adult mental health rankings, largely due to poor access to mental health care for adults. Table 2 reveals these disparities for adults with any mental illness (AMI). Comparatively large proportions of adults with AMI were unable to see a doctor due to costs, or because they were uninsured. Indeed, Mental Health America notes that Virginia’s adult ranking dropped from 13th to 42nd between 2011 and 2017 – the largest decrease anywhere in the country. However, as the latest data are from 2017-2018, and Virginia has recently expanded Medicaid, we’ve seen a slight improvement: Virginia is now ranked 27th.

Virginia Violent Death Reporting System (VVDRS) statistics reveal the number of suicides by youth, ages 10-19, in Virginia’s health regions (Figure 1 and Graph 3) from 2013 to 2017.⁹ The prevalence of youth suicide in the Commonwealth is similar to national averages. The data indicate that there is variation across the Commonwealth and time. The southwest and central regions are relatively stable over the period in question. The eastern and northwest regions have observed increases, while the northern region has seen a decline in youth suicides.

TABLE 2
VIRGINIA'S ADULT MENTAL HEALTH RANKING, 2021

| Indicator | Percentage | Ranking |
|---|------------|-----------|
| Adult prevalence of mental illness - adults with any mental illness (AMI) | 17.4% | 4 |
| Adults with substance use disorder in the past year | 7.3% | 16 |
| Adults with serious thoughts of suicide | 4.2% | 10 |
| Adults with AMI who are uninsured, 2020 | 13.5% | 40 |
| Adults with AMI who did not receive treatment | 54.5% | 28 |
| Adults with AMI reporting unmet need | 28.6% | 47 |
| Adults with disability who could not see a doctor due to costs | 34.2% | 45 |
| Overall adult ranking | - | 29 |

Source: Mental Health America (2021), <https://www.mhanational.org/issues/2021/mental-health-america-adult-data#five>

⁹ Health region definitions are available at: https://www.vdh.virginia.gov/content/uploads/sites/10/2017/02/DEMOGRAPHICS_FINAL.pdf#page=5.

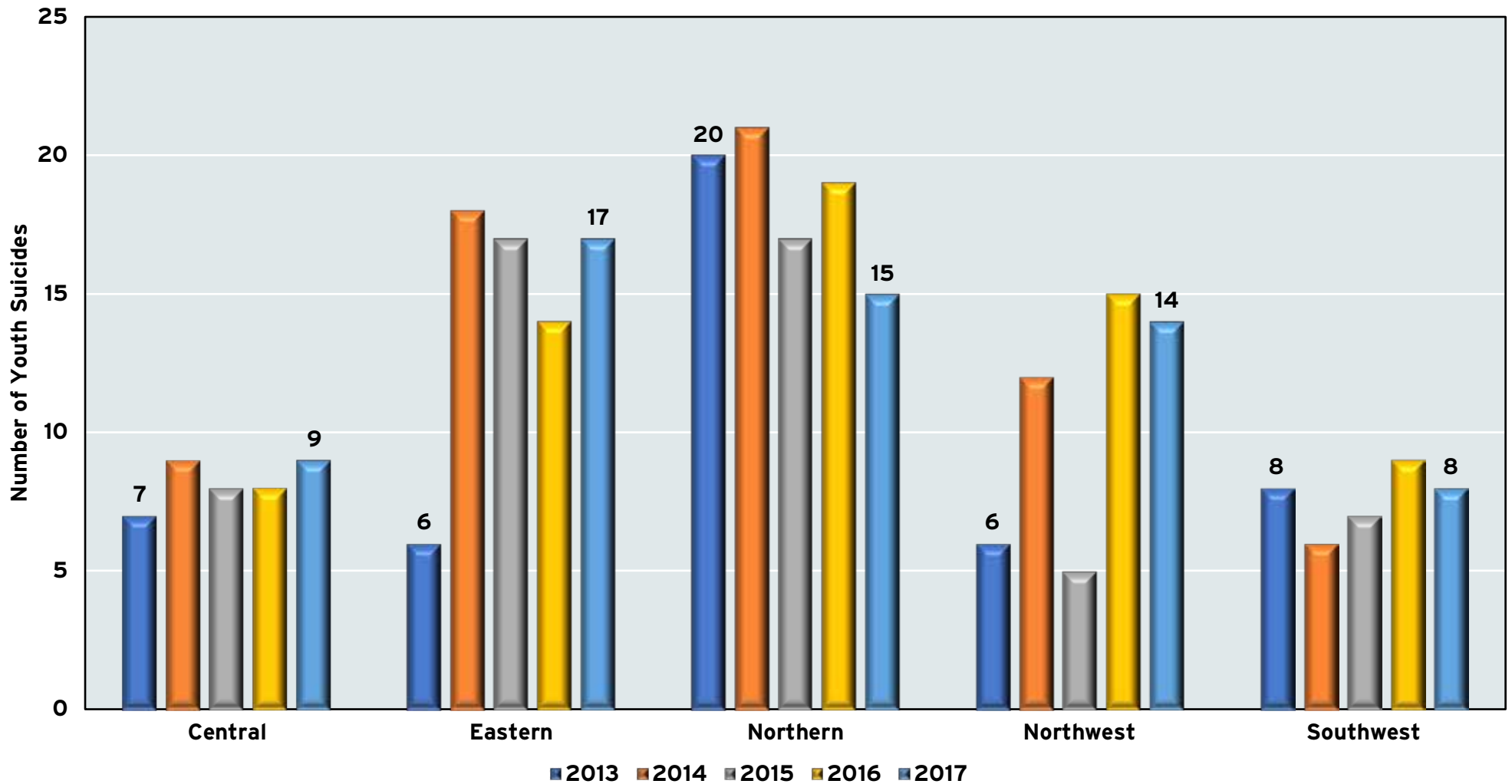
FIGURE 1
VIRGINIA HEALTH REGIONS



Source: Virginia Department of Health (2020)

GRAPH 3

NUMBER OF SUICIDES AMONG INDIVIDUALS AGES 10-19:
VIRGINIA HEALTH REGIONS, 2013-2017



Sources: Data reported to the Virginia Department of Health and analyzed by Virginia Department of Health IVP epidemiology staff, and the Dragas Center for Economic Analysis and Policy, Old Dominion University, October 2020

Barriers To Mental Health Care

Affordability and adequate insurance coverage are significant barriers to accessing care; another is the availability of treatment. Everywhere in the United States, there is a shortage of professionals who specialize in youth mental health care. More simply put, the supply of specialists has not yet caught up with the dramatic increase in demand. There are around 8,300 child and adolescent psychiatrists practicing in the U.S. today, but the unmet need is much greater.¹⁰ The Centers for Disease Control and Prevention (CDC) estimates that 12,624 such specialists are currently needed; regional professionals suggested to us that the need might even approach 30,000.¹¹

Geography is one of the leading factors that affect young people's access to care. Sixty-one percent of areas with a mental health professional shortage are rural or partially rural. CDC statistics indicate considerable disparities in the proportion of pediatricians, psychiatrists, family medicine physicians, licensed social workers and psychologists in the various localities. Henry County in Southside Virginia, for example, had no reported pediatricians, psychiatrists or psychologists, as of the most recent data. Table 3 illustrates the stark contrast of geographic availability of professionals throughout the Commonwealth, with many localities simply devoid of appropriate care, by displaying five localities with the highest and lowest number of providers. We include a more detailed list of cities and counties in Virginia at the end of this chapter (Table 8).

CHKD'S NEW MENTAL HEALTH FACILITY, CURRENTLY UNDER CONSTRUCTION IN NORFOLK



Illustration courtesy of CHKD (2020)

The Children's Hospital of The King's Daughters (CHKD) mental health hospital, now under construction, will provide urgently needed services to children. The \$224 million, 14-story tower on the CHKD/EVMS/Sentara medical campus in Norfolk is slated to open in 2022. It will have 60 inpatient beds and offer an array of outpatient treatments, including "partial hospitalization." CHKD is Virginia's only freestanding children's hospital and houses the state's only Level I pediatric surgery program, serving patients as far north as Virginia's Middle Peninsula, as far west as Williamsburg and as far south as Elizabeth City, N.C.

¹⁰ American Academy of Child & Adolescent Psychiatry (AACAP), Workforce Issues, https://www.aacap.org/AACAP/Resources_for_Primary_Care/Workforce_Issues.aspx.

¹¹ <https://www.cdc.gov/childrensmentalhealth/data.html>.

TABLE 3

**PROVIDER RATES PER 10,000 CHILDREN (AGES 0-17):
SELECTED VIRGINIA LOCALITIES, 2015**

| Locality | Pediatricians | Psychiatrists | Family Medicine Physicians | Licensed Social Workers | Psychologists |
|-------------------|---------------|---------------|----------------------------|-------------------------|---------------|
| Lexington | 33.3 | 11.1 | 77.7 | 133.2 | 99.9 |
| Charlottesville | 43.4 | 26.6 | 26.6 | 114.9 | 141.6 |
| Fairfax | 5.2 | 7 | 22.6 | 154.8 | 125.2 |
| Salem | 15.8 | 23.7 | 31.6 | 146 | 88.8 |
| Fredericksburg | 22.6 | 12.2 | 24.3 | 93.8 | 41.7 |
| Cumberland County | 0 | 0 | 4.8 | 0 | 0 |
| Henry County | 0 | 0 | 4.8 | 0 | 0 |
| Appomattox | 0 | 0 | 3 | 0 | 0 |
| Manassas Park | 0 | 0 | 2.6 | 0 | 0 |
| Bland County | 0 | 0 | 0 | 0 | 0 |

Sources: Centers for Disease Control and Prevention, Behavioral Health Services in Virginia (estimates may be inflated for localities with fewer than 10,000 residents), <https://www.cdc.gov/childrensmentalhealth/stateprofiles-providers/virginia/index.html>, and the Dragas Center for Economic Analysis and Policy, Old Dominion University, 2020

Youth Mental Health: Finding Help

The National Alliance on Mental Illness (NAMI) is self-described as “the nation’s largest grassroots mental health organization,” with more than 500 affiliates across the country that provide support and education to people living with mental health conditions, and to their families and caregivers. Early intervention can reduce the prevalence of serious mental health cases, yet only 7% of expenditures for mental health in Virginia goes to individuals under the age of 18.¹² In January 2020, NAMI of Virginia surveyed youth and young adults in the Commonwealth to find out how hard it has been for them to get help for their mental health needs. Of those who reported having difficulty, 44.3% responded “moderately difficult,” 13.2% “difficult” and 5.7% “very difficult.”

Why are our children not getting the help they need? Reasons include a lack of mental health providers trained and available to help,

limitations of public and private insurance coverage, the existence of an uncoordinated care system at the local and state levels, and often, the reluctance of families and youth to seek help due to feelings of shame. Table 4 lists NAMI affiliates that offer counseling sessions and support groups throughout the Commonwealth.

The Ending the Silence and Say It Out Loud programs for teens, which aim to open up conversations about mental health, are one-time sessions NAMI provides to schools, faith-based organizations and other community groups in the Commonwealth. All NAMI classes, special programs and support groups are offered free of charge.

Table 5 shows the various hotlines available to struggling youths and adults in Virginia. The existence of these hotlines demonstrates the ongoing need to destigmatize mental health issues. Starting in July 2022, a new mental health emergency hotline, 988, will be available nationally.

TABLE 4

NAMI AFFILIATES, VIRGINIA

| NAMI Affiliate | Geographic Service Area | City |
|-----------------------------------|--|-----------------|
| NAMI Blue Ridge Charlottesville | Charlottesville, Albemarle County and surrounding areas | Charlottesville |
| NAMI Central Shenandoah Valley VA | Staunton; Bath, Highland, Rockbridge and Augusta counties | Staunton |
| NAMI Central Virginia | Richmond metropolitan area and Greater Petersburg area | Richmond |
| NAMI Coastal Virginia | Virginia Beach, Chesapeake, Norfolk, Portsmouth and the Eastern Shore | Virginia Beach |
| NAMI Hampton/Newport News | Hampton Roads Peninsula | Hampton |
| NAMI Mid-Tidewater | Middle Peninsula and Northern Neck | Gloucester |
| NAMI New River Valley VA | Blacksburg, Christiansburg, Radford; Floyd, Giles, Montgomery and Pulaski counties | Blacksburg |
| NAMI Northern Shenandoah Valley | Winchester; Clarke, Warren, Frederick, Page and Shenandoah counties | Winchester |
| NAMI Northern Virginia | Alexandria, Fairfax and Falls Church; Fairfax, Arlington and Loudoun counties | Reston |
| NAMI Piedmont | Culpeper, Rappahannock, Fauquier, Madison and Orange counties | - |
| NAMI Prince William | Manassas and Manassas Park; Prince William County | Woodbridge |
| NAMI Rappahannock | Fredericksburg; King George, Spotsylvania, Stafford and Caroline counties | Fredericksburg |
| NAMI Roanoke Valley | Roanoke area | Roanoke |
| NAMI Williamsburg | Poquoson, Williamsburg; James City and York counties | Williamsburg |

Source: https://namivirginia.org/local-affiliate/wpbdp_category/namiaffiliates

¹² National Alliance on Mental Illness (NAMI) Virginia, <http://namivirginia.org/wp-content/uploads/sites/127/2016/03/MlandVirginiaYouth.pdf>.

TABLE 5
SUICIDE HOTLINES: VIRGINIA, 2020

| Location | Name | Phone Number |
|-------------------|-------------------------------------|----------------------------------|
| Arlington | Crisis Link | (703) 527-4077 |
| Blacksburg | New River Valley Community Services | (540) 961-8400 |
| Bristol | Crisis Center | (540) 628-7731 (540) 466-2312 |
| Charlottesville | Madison House | (804) 295-8255 |
| Danville | Contact Crisis Line | (804) 792-4357 |
| Dumfries | ACTS Helpline Teenline | (703) 368-4141 (703) 368-8069 |
| Lynchburg | The Crisis Line of Central Virginia | (804) 947-4357 1-888-947-9747 |
| Martinsville | CONTACT Teenline | (540) 632-7295 (540) 634-5005 |
| Norfolk | Crisisline | (757) 622-1126 |
| Richmond | West End Behavioral HealthCare | (804) 819-4100 |
| Roanoke | Listen Line Teenline | (540) 344-1948 (540) 982-8336 |
| Winchester | Concern Hotline | (540) 667-0145 |
| Franklin County | Concern Hotline | (540) 489-5490 |
| Patrick County | Concern Hotline | (540) 694-2962 |
| Clarke County | Concern Hotline | (540) 667-0145 |
| Frederick County | Concern Hotline | (540) 667-0145 |
| Page County | Concern Hotline | (540) 743-3733 |
| Shenandoah County | Concern Hotline | (540) 459-4742 |
| Warren County | Concern Hotline | (540) 635-HELP (4357) |

Source: Virginia Suicide and Crisis Hotlines, 2020, <http://www.suicidehotlines.com/virginia.html> and <http://www.suicide.org/hotlines/virginia-suicide-hotlines.html>

Recent Legislative Efforts To Improve Youth Mental Health In Virginia

Public perception of and attitudes toward mental health have shifted in recent decades. Mental health hasn't always been recognized as equal in importance to that of physical health. Virginia has worked to make youth mental health a greater priority. In 1993, the Commonwealth passed the Children's Services Act (CSA). This law introduced the use of state-funded mental health support services for eligible children and their families. It combined the efforts of both state and local governments to help ensure that effective resources and care are available to those families in need.

Members of the Virginia General Assembly introduced several mental health bills during the 2020 session. Table 6 outlines the major bills and their outcomes. House Bill 308 proved to be an important change for Virginia's public education system. Prior to this bill, Virginia lacked a standard for addressing mental health in its schools. With the bill's approval, students in grades K-12 are now allowed excused absences for mental or behavioral health issues.



TABLE 6

2020 YOUTH MENTAL HEALTH LEGISLATION, VIRGINIA

| Youth Mental Health Legislation | Description | Date Passed |
|---------------------------------|---|---|
| HB 308 | Requires the Department of Education to establish guidelines (no later than Dec. 31, 2020) for the granting of excused absences to students in public elementary and secondary schools who are absent due to mental or behavioral health. | February 2020 |
| HB 1419 SB 171 | School resource officers and school security officers required to receive training on medication and conflict resolution, including de-escalation techniques, working with students with mental health needs. | March 2020 |
| HB 74 SB 619 | Mandates local school boards to require each full-time “teacher and other relevant personnel” to complete a mental health awareness training. Training is required each time the teacher renews his/her license. | March 2020 |
| HB 1508 (inc. HB 398) | Local school boards need to employ one full-time equivalent school counselor position per 325 students (grades K-12); HB 398 requires school boards to employ one school counselor and one social worker for every 250 students in each elementary school, middle school and high school in which at least 50% of the students are eligible for federal free lunch. | March 2020 |
| HB 40 | Requires the Department of Education to collaborate with the Department of Behavioral Health and Developmental Services to require that each public school create and maintain a mental health break space. | Tabled; to be continued in 2021 by voice vote |

Sources: Mental Health America of Virginia and Virginia 2020 Legislative Session, Summary Highlights, March 2020, <https://mhav.org/wp-content/uploads/2020/03/Summary-of-Virginia-2020-Legislative-Session.pdf>, and Voices for Virginia’s Children, 2020 Legislation Impacting Children’s Mental Health Services, Feb. 6, 2020, <https://vakids.org/our-news/blog/2020-legislation-impacting-childrens-mental-health-services>

Major Youth Mental Health Providers In Virginia

In addition to legislative efforts to prioritize initiatives for addressing youth mental health needs, multiple organizations across the Commonwealth provide services to children and adolescents (Table 7). The Commonwealth Center for Children and Adolescents, located in Staunton, is Virginia's sole inpatient hospital dedicated to the mental health needs of children. Run by the Virginia Department of Behavioral Health and Developmental Services, this hospital has four 12-bed living units as well as educational and recreational space for patients. In 2018, the overburdened hospital experienced "four consecutive months of 100-plus admissions for a state psychiatric hospital with 48 beds."¹³

THE COMMONWEALTH CENTER FOR CHILDREN AND ADOLESCENTS IN STAUNTON



¹³ https://richmond.com/news/local/government-politics/as-summer-ends-pressures-build-again-at-virginias-only-state-mental-hospital-for-kids/article_125540ea-5f1c-5e29-958b-6147540fb46f.html.

TABLE 7

SELECTED YOUTH MENTAL HEALTH ORGANIZATIONS, VIRGINIA

| Organization | Location | Services |
|--|-----------------|---|
| Barry Robinson Center | Norfolk | Residential treatment program for boys and girls, ages 6-17, with mental health issues |
| Bridges Treatment Center | Lynchburg | Psychiatric residential and educational services for boys and girls, ages 6-17, with emotional and behavioral issues |
| Child and Family Healing Center (UMFS) | Richmond | 24-hour intensive residential treatment; 11-17-year-old males, females or other genders |
| The Commonwealth Center for Children and Adolescents | Staunton | Acute care, mental health facility for youth under 18 |
| Hallmark Youthcare | Richmond | 24/7 psychiatric and nursing care for children ages 11-17 |
| Harbor Point Behavioral Health Center | Portsmouth | Serves children and adolescents 6-17 who are diagnosed with psychiatric disorders or struggle with a general psychiatric disorder or behavioral health issues |
| Inova Behavioral Health Services | Falls Church | Serves adults, children and adolescents by offering full spectrum of mental health and substance use treatment services |
| Kempsville Center for Behavioral Health | Norfolk | Residential treatment for adolescent boys and girls, ages 11-17 |
| Newport News Behavioral Health Center | Newport News | Serves adolescents, ages 11-18, who suffer from severe symptoms of a psychiatric disorder |
| North Spring Behavioral Healthcare | Leesburg | Offers a comprehensive range of inpatient and outpatient treatment services for children ages 7-17 |
| Poplar Springs Hospital | Petersburg | Acute crisis stabilization for boys and girls, ages 11-17, in danger of harming themselves or others |
| Prince William Psychiatric Center | Manassas | Provides high-quality inpatient and outpatient mental health and substance abuse treatments for adults, seniors, adolescents and children with behavioral health issues |
| Riverside Behavioral Health Center | Hampton | Provides long-term intensive treatment for boys and girls, ages 12-17 |
| Southstone Behavioral Health Hospital | South Boston | Serves adolescents, ages 11-17, who are experiencing mental or behavioral health concerns |
| Three Rivers Treatment Center | Kenbridge | Helps adolescents with behavioral problems |
| Veritas Collaborative | Richmond | Provides individualized best-practice care tailored to the unique needs of children and adolescents, up to age 17 |
| Virginia Treatment Center for Children | Richmond | Short-term rehabilitation and stabilization center dealing with children and adolescents |

Source: NAMI Virginia and Virginia Family Network, Residential Treatment Centers in Virginia, 2020, <https://namivirginia.org/wp-content/uploads/sites/127/2020/08/Residential-Treatment-Center-in-Virginia-PDF.pdf>

COVID-19: Emerging Evidence Of The Impact On Mental Health

If there is a thin silver lining to the tremendous costs of the COVID-19 pandemic, it is that the novel coronavirus does not appear to be as deadly to youth. Although scientists continue to learn more about COVID-19 and how it manifests itself, the CDC has reported that just 2% of all confirmed cases in the United States are among people 18 and under.¹⁴

Even so, the potential mental health effects of COVID-19 on children are dire – and not just for those who fall ill, or whose family members and loved ones have contracted the virus. The demands of quarantine and social distancing have upended schooling, social support networks and daily routines for all children. Most Virginia students have not been in a traditional school setting since the middle of March. They have missed daily check-ins with teachers and counselors, interactions with peers and milestones such as graduations, concerts and sports tournaments.

It remains to be seen how the delivery of education will play out for the rest of the 2020-21 school year. Some school districts will return to in-person instruction, while others will go with a hybrid model (typically two days in class with three days at home) or stay remote. What the longer-term effects will be on student outcomes, from the public health, economic and social shock standpoints, remains to be seen. Children from lower-income households, and those from other at-risk populations, are likely to suffer the most from these upheavals. NAMI Virginia Executive Director Kathy Harkey tells us that “as parents are striving to balance parenting with remote work from home, children have difficulty understanding that their parents are home but unable to drop income-producing activities to meet their immediate needs. This leads to frustration and anxiety for both

parents and youth. On a positive note, some parents are more involved in the academic aspect of their children’s lives.”

Numerous surveys suggest that adult mental health also has been profoundly affected by the pandemic. In 2019, the U.S. Census reported that 1 in 11 households exhibited symptoms of anxiety or depression. By September 2020, more than 1 in 3 households exhibited signs of anxiety or depression.¹⁵ A research team at Christopher Newport University, led by psychology professor Sherman Lee, has identified a range of psychological difficulties associated with “dysfunctional coronavirus anxiety,” including “greater hopelessness, suicidal ideation, spiritual crisis and alcohol/drug coping.” The team has developed two mental health tests, the Coronavirus Anxiety Scale and the Obsession with COVID-19 Scale, which have been adopted worldwide.¹⁶

As we completed work on this chapter in the fall, specific data on the effects of COVID-19 on children’s mental health were not yet available. However, in late October 2020, Mental Health America released “COVID-19 and Mental Health: A Growing Crisis,” which offered some insight on the pandemic’s effects. According to the report, as of September 2020, throughout the pandemic a growing number of children ages 11-17 have experienced an increased need for mental health help and have been more likely to exhibit moderate to severe anxiety symptoms. Additionally, the rates of suicide ideation are highest among youths, with over half of the 11- to 17-year-old respondents reporting having thoughts of suicide or self-harm more than half or nearly every day of the previous week.¹⁷ These numbers were especially high among LGBTQ youths.

Stephanie Osler, director of CHKD’s Mental Health Service Line, suggests that we can look to the experiences of children following the traumas of the 9/11 terrorist attacks and Hurricane Katrina in 2005 as instructive examples. She notes that an important lesson from these events is that adults, who may be overwhelmed themselves, do not always recognize

14 “Burden of COVID-19 among children,” available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/pediatric-hcp.html> (accessed June 22, 2020).

15 U.S. Census Bureau Household Pulse Survey, 2020.

16 S.A. Lee, M.C. Jobe and A.A. Mathis, “Mental health characteristics associated with dysfunctional coronavirus anxiety,” *Psychological Medicine* 1-2 (2020), available at: <https://doi.org/10.1017/S003329172000121X>; Jim Hanchett, “‘Coronaphobia’ tests developed at CNU now used worldwide,” Christopher Newport University Newsroom (April 30, 2020), available at: https://cnu.edu/news/2020/04/30-psyc-f_lee/; Joanne Kimberlin, “Angry? Resentful? Feeling guilty? Psych footprint of pandemic is huge,” *The Virginian-Pilot* (May 23, 2020), available at: <https://www.pilotonline.com/coronavirus/vp-nw-coronavirus-ptsd-20200523-nlsaw3wvkrfpoy3zlcchk143jm-story.html>; and Alyssa Fowers and William Wan, “A third of Americans now show signs of clinical anxiety or depression,” *The Washington Post* (May 26, 2020), available at: <https://www.washingtonpost.com/health/2020/05/26/americans-with-depression-anxiety-pandemic/>.

17 Mental Health America, COVID-19 and Mental Health: A Growing Crisis, October 2020, available at: <https://mhanational.org/sites/default/files/Spotlight%202021%20-%20COVID-19%20and%20Mental%20Health.pdf>.

how children are struggling. Thus, it is particularly important for parents and other responsible adults to watch for unusual changes in children's behavior – such as having difficulty eating or sleeping or becoming more withdrawn. All children respond to trauma differently, but its effects can be especially devastating for those who are already suffering from anxiety, depression or other adverse life experiences.



New Delivery Modes For Mental Health Services

Our conversations with mental health providers throughout the Commonwealth indicate some notable changes since the onset of the pandemic. CHKD initially experienced a drop in the number of children accessing its mental health services – which is typical in the early stages of a major crisis, as families focus on survival and other immediate concerns. According to Osler, the hospital has since begun to see children “with much more complexity who are more difficult to manage in the home without the consistency in routine/structure that school and other activities provide.”

The demands of social distancing have compelled all providers to transform their delivery of services. Within a matter of weeks, nearly all outpatient mental health services shifted to telehealth – that is, the use of the internet and other technologies to engage virtually with clients. At the Children’s Hospital of Richmond at Virginia Commonwealth University, telehealth is changing the landscape for youth mental health. The disruption of COVID-19 to children’s mental health care proved to be stressful and worrying for both children and their parents. With school schedules and normal activities interrupted, the uncertainties of one’s day-to-day routine heightened anxiety. Dr. Cheryl Al-Mateen, director of VCU’s Virginia Treatment Center for Children, acknowledges the challenges associated with telehealth but reports the vast majority of appointments conducted via this mode are successful.¹⁸ Also, as cited in a May 5, 2020, *Virginian-Pilot* story, the Steven A. Cohen Military Family Clinic quickly pivoted from seeing “just over a dozen” of its clients through telehealth services to nearly 300, which is approximately a 2,400% increase in the number of veterans and military family members who sought help online.¹⁹

Chloe Sanders, NAMI Virginia program assistant, tells us that the majority of NAMI affiliates moved their programs and support groups online due to COVID-19, with NAMI Coastal Virginia and NAMI Prince William opening up their programming statewide for others outside their areas who might be interested in attending or for those in an area without an affiliate, or an affiliate doing online programming.²⁰ This transition to an online platform has allowed organizations to expand their reach to serve a greater number of people. The free online support groups and classes, which are aimed at connecting young people across the state, foster mental health awareness, treatment and resiliency. Preliminary evidence from providers indicates that parental satisfaction with telehealth appointments is high, and no-show rates have dropped significantly.

Ashley Airington, a policy analyst with the advocacy organization Voices for Virginia’s Children, observes that “it took a public health crisis to convince federal and state regulators to allow mental health services to be delivered via telehealth.”²¹ Now that necessity has chipped away at this resistance, telehealth may come to assume a larger role in addressing children’s needs in underserved rural areas even after the threat of COVID-19 has passed.

If smartphones and internet technologies have played a contributing role in easing the mental health struggles of our youth, the pandemic has shown us that these same technologies can also offer a needed lifeline in times of crisis and quarantine. However, NAMI Virginia’s Kathy Harkey still cautions that “before major decisions are made, we must ask ourselves: Is it more beneficial or detrimental to youth and young adults to be involved in in-person activities such as physical school classrooms or doctor visits during COVID-19? Are we making the best decisions for our youth when we encourage virtual communication interaction in place of in-person interaction?”

¹⁸ Children’s Hospital of Richmond at VCU, “How telehealth is changing mental health for kids,” May 7, 2020, available at: <https://www.chrichmond.org/blog/how-telehealth-is-changing-mental-health-for-kids>.

¹⁹ Katherine Hafner, “Demand for mental health services in military community surges amid pandemic stress,” *The Virginian-Pilot* (May 5, 2020), available at: <https://www.pilotonline.com/news/health/vp-nw-coronavirus-military-mental-health-20200505-xuvcavxzhbb15kjpfnlagjsmoi-story.html>.

²⁰ Online Programs, (n.d.), NAMI Virginia, available at: <https://namivirginia.org/programs/online-programs/>.

²¹ Ashley Airington, “Tele-mental Health in Virginia: Addressing Children’s Mental Health Needs during COVID-19,” *Voices’ Blog* (May 14, 2020), available at: <https://vakids.org/our-news/blog/expanded-telemental-health-services-in-virginia-addressing-mental-health-needs-of-children-during-the-pandemic>.



Final Observations

I was so upset, I forgot to be happy.

- Eeyore, "Winnie-the-Pooh," A.A. Milne

The treatment of pediatric psychiatric disorders is expensive. Statistics provided in May 2019 by Dr. Gregory K. Fritz, past president of the American Academy of Child and Adolescent Psychiatry, placed mental disorders at the top of the most costly conditions among children, both in terms of total-dollar and per-child expenditures.²² However, the costs of *not* caring for our children's mental health may be far greater.

A commonly cited statistic is that half of all chronic mental illness is apparent by age 14; 75% of mental disorders begin by age 24. The emotional costs of childhood mental illness are undisputed. What may be less appreciated is the fact that the economic costs – both in terms of health care spending and diminished human potential – are also vast. A 2011 report by the World Economic Forum and the Harvard School of Public Health, summarized last year in the Stanford Social Innovation Review, found that mental illness “has a greater impact on economic output than cancer, heart disease, or diabetes.” The report’s authors estimate the worldwide cost of mental illness to be \$16 trillion between 2011 and 2030. Other recent research has indicated that untreated anxiety and depression costs society \$1.5 trillion annually.²³

The World Health Organization estimates that every U.S. dollar spent on “scaling up treatment for common mental illnesses such as depression and anxiety” leads to a four-fold return in better health and the ability to work.²⁴ Our state’s mental health care providers – including hospitals, clinics, schools, human services departments and community services boards – offer services that are indispensable to the well-being of

²² See “Children’s Mental Wellness,” available at: <https://hamptonroadscf.org/Leadership-Initiatives/Childrens-Mental-Wellness>. We are grateful to the Hampton Roads Community Foundation for providing us access to Dr. Fritz’s presentation.

²³ World Economic Forum and the Harvard School of Public Health, “The Global Economic Burden of Non-communicable Diseases” (September 2011), available at: http://www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenNonCommunicableDiseases_2011.pdf; and Eliot Brenner, “The Crisis of Youth Mental Health,” Stanford Social Innovation Review (spring 2019), available at: https://ssir.org/articles/entry/the_crisis_of_youth_mental_health.

²⁴ World Health Organization, “Mental health: massive scale-up of resources needed if global targets are to be met” (June 6, 2018), available at: https://www.who.int/mental_health/evidence/atlas/atlas_2017_web_note/en/.

Virginia's residents. Investing in the mental health of children is an investment in our future.

What, then, can be done?

Work to remove the stigma surrounding mental health: If a child broke their leg while riding a bicycle, we would (hopefully) not tell them to “walk it off,” or “other kids with broken legs don’t complain.” Mental health is a complex phenomenon that has mental, emotional and physical manifestations. We must recognize and remove older ways of thinking that categorize mental illness as “rare, a choice or a symptom of laziness.” Against this narrative, children and parents may not be willing to be open about the concerns at hand. Learning about the signs of mental health conditions, encouraging those who might have issues to find help and supporting organizations in this field are actions we can all undertake.

Examine your company's policies regarding mental health: Does your company view the mental health issues of employees or dependents differently than physical ailments? Given the vital importance of mental health to employee productivity and morale, attention to mental health is not merely a means to improve the image of your business; it can also boost profitability. If employees are forced to choose between their children's mental health needs and their company's bottom line, the option they will choose is clear. Supporting employees in this way is also likely to boost retention and reduce turnover costs.

Improve mental health funding for schools: We have long advocated for wise investments in K-12 education. Supporting children by improving access to mental health screening and services within schools is an investment that will yield long-term dividends. The manifestations of mental health issues, such as substance abuse, self-harm and bullying, disrupt learning. Early intervention reduces the costs to individuals and society. Similar to how food programs have expanded to ensure that children do not go to school hungry, we must look at ways to expand services where children spend much of their time during the academic year. Some gains were found in the 2020 Virginia General Assembly sessions. In February 2020, the legislature approved a bill that now allows students in grades K-12 to receive excused absences for mental or behavioral health issues. Prior to this bill's passing, Virginia had no

standard for addressing mental health in schools. House Bill 74 will require full-time teachers to complete mental health awareness training in order to understand and help prevent related issues, and to recognize the signs of mental health problems. The bill requires school boards to adopt and implement policies for the training, which can be completed online. School mental health services support the mission and purpose of schools: learning. Teaching children how to cope with life's challenges will most assuredly better prepare them for becoming resilient adults.

These changes are neither instantaneous nor easy. We are, however, moving in the right direction. Improving mental health services for Virginia's youth not only provides benefits to those in need, but it also enhances the attractiveness of the Commonwealth to businesses and talent. With all the pandemic-related challenges we face, this effort should enjoy broad, sustained and enthusiastic support.

TABLE 8

**NUMBER OF PROVIDERS PER 10,000 CHILDREN (AGES 0-17):
VIRGINIA LOCALITIES, 2015**

| Locality | Pediatricians | Psychiatrists | Family Medicine Physicians | Licensed Social Workers | Psychologists |
|---------------------|---------------|---------------|----------------------------|-------------------------|---------------|
| Albemarle County | 21.4 | 16 | 31.9 | 12.8 | 22.4 |
| Alexandria | 10.5 | 9 | 11.2 | 0 | 1.9 |
| Amelia County | 0 | 0 | 0 | 11.1 | 3.7 |
| Amherst County | 0 | 0 | 6.3 | 6.3 | 0 |
| Appomattox County | 0 | 0 | 3 | 0 | 0 |
| Arlington County | 10 | 7.7 | 10 | 1.5 | 0.8 |
| Augusta County | 8.9 | 4.1 | 13.7 | 4.8 | 5.5 |
| Bedford County | 2.6 | 0 | 19.2 | 2.6 | 1.9 |
| Bland County | 0 | 0 | 0 | 0 | 0 |
| Botetourt County | 4.5 | 6 | 22.6 | 3 | 1.5 |
| Bristol | 0 | 5.8 | 20.4 | 14.6 | 2.9 |
| Buckingham County | 0 | 0 | 6.3 | 6.3 | 9.4 |
| Caroline County | 0 | 0 | 2.9 | 2.9 | 2.9 |
| Charles City County | 0 | 0 | 9 | 9 | 9 |
| Charlottesville | 43.4 | 26.6 | 26.6 | 114.9 | 141.6 |
| Chesapeake | 9.1 | 1.9 | 17.2 | 11.7 | 3.9 |
| Clarke County | 3.2 | 0 | 16.2 | 6.5 | 3.2 |
| Craig County | 0 | 0 | 9.9 | 0 | 0 |
| Cumberland County | 0 | 0 | 4.8 | 0 | 0 |
| Danville | 6.3 | 4.2 | 16.9 | 19 | 12.7 |
| Fairfax | 5.2 | 7 | 22.6 | 154.8 | 125.2 |
| Floyd County | 0 | 0 | 18.8 | 9.4 | 0 |
| Franklin County | 3.6 | 0 | 18 | 2.7 | 0 |
| Fredericksburg | 22.6 | 12.2 | 24.3 | 93.8 | 41.7 |
| Galax | 11.9 | 6 | 29.8 | 65.5 | 0 |
| Giles County | 0 | 0 | 20.1 | 0 | 0 |
| Gloucester County | 1.3 | 1.3 | 13.2 | 17.1 | 9.2 |
| Hampton | 4 | 6.7 | 12.4 | 40.3 | 13.8 |


TABLE 8

**NUMBER OF PROVIDERS PER 10,000 CHILDREN (AGES 0-17):
VIRGINIA LOCALITIES, 2015**

| Locality | Pediatricians | Psychiatrists | Family Medicine Physicians | Licensed Social Workers | Psychologists |
|--------------------|---------------|---------------|----------------------------|-------------------------|---------------|
| Harrisonburg | 5.9 | 5.9 | 27 | 32.9 | 31.7 |
| Henrico County | 10.9 | 7.4 | 16.2 | 38.6 | 20.2 |
| Henry County | 0 | 0 | 4.8 | 0 | 0 |
| James City County | 10.5 | 14.4 | 26.3 | 25 | 23 |
| Lexington | 33.3 | 11.1 | 77.7 | 133.2 | 99.9 |
| Lynchburg | 10.8 | 7 | 31.1 | 24.7 | 13.9 |
| Manassas Park | 0 | 0 | 2.6 | 0 | 0 |
| Mathews County | 6.7 | 0 | 13.4 | 6.7 | 0 |
| Montgomery County | 5.8 | 7.1 | 23.1 | 32.1 | 18.6 |
| Newport News | 6.3 | 0.9 | 14.7 | 15.1 | 10 |
| Norfolk | 16.2 | 5.8 | 11.6 | 28.9 | 17.4 |
| Norton | 43.3 | 0 | 43.3 | 86.7 | 0 |
| Petersburg | 1.4 | 4.2 | 6.9 | 33.3 | 11.1 |
| Poquoson | 3.8 | 7.6 | 30.4 | 19 | 7.6 |
| Portsmouth | 8 | 4.4 | 16.4 | 25.3 | 15.6 |
| Richmond | 12.9 | 9 | 13.7 | 61 | 26.6 |
| Roanoke | 6.4 | 7.3 | 19.6 | 32.8 | 7.7 |
| Rockingham County | 6.3 | 1.7 | 14.3 | 1.1 | 0.6 |
| Salem | 15.8 | 23.7 | 31.6 | 146 | 88.8 |
| Southampton County | 2.9 | 0 | 8.7 | 0 | 0 |
| Staunton | 6.5 | 6.5 | 21.6 | 49.6 | 49.6 |
| Suffolk | 9.7 | 3.2 | 13.9 | 5.5 | 4.2 |
| Virginia Beach | 9.1 | 4.4 | 15.5 | 21.7 | 10.4 |
| Waynesboro | 3.9 | 0 | 11.8 | 9.8 | 11.8 |
| Williamsburg | 6.4 | 6.4 | 19.3 | 0 | 6.4 |
| York County | 7.5 | 8.8 | 26.3 | 10.6 | 5 |

Source: Centers for Disease Control and Prevention, Behavioral Health Services in Virginia (estimates may be inflated for localities with fewer than 10,000 residents), <https://www.cdc.gov/childrensmentalhealth/stateprofiles-providers/virginia/index.html>

**VIRGINIA'S OPIOID
EPIDEMIC CONTINUES
AND COVID-19 MAY BE
MAKING IT WORSE**



We first wrote in detail about opioid abuse in the State of the Commonwealth Report in 2017, a year when opioid abuse and opioid deaths unfortunately began to capture public attention. We described the situation in Virginia and nationally as one that was spinning out of control and already had imposed significant costs on all citizens, opioid users or not.

Alas, the only thing that has changed in the three years since is that Virginia now finds itself in the unenviable position of being in the midst of *two* ongoing health crises – the tragic calamity of COVID-19 and our ongoing opioid predicament. The coronavirus pandemic is on everyone’s mind because it has forced drastic changes in behavior. Opioid abuse, on the other hand, represents a longer-term, more slowly developing challenge that simply refuses to go away.

We pay more attention currently to COVID-19 because its effects are so widespread and so easy to see. These include an upsurge in COVID-19-related infections and deaths across Virginia; an unprecedented rise in unemployment that has spread itself unequally across the citizenry; scores of failing restaurants and other businesses; schools and colleges that worry if they can continue to be effective or even survive; hospitals that have been forced to cancel patient visits and operations for maladies such as cancer that

are unrelated to the coronavirus; canceled or abbreviated athletic seasons; truncated arts and performance schedules; and reduced tax collections. The end result is that our social lives have contracted like accordions, and we long for the appearance of reliable tests and vaccines that might end this nightmare. We outlined the far-reaching economic impact of these developments in the first chapter of this report.

Nonetheless, while COVID-19 is a tragedy of immense proportions (more than 250,000 deaths nationally, including more than 3,800 deaths in Virginia), plausibly it is a circumstance that we can overcome within a few years if we exercise discipline. The privations we now are experiencing may turn out to be (we hope) temporary.

On the other hand, opioid addiction and abuses that too often lead to death constitute a stealthier opponent whose impact has not diminished. Vanquishing opioid abuse will require ongoing attention and remedies. Data released by the Centers for Disease Control and Prevention (CDC) underline the long-term, destructive impact of opioid addiction. An estimated 2 million Americans have an opioid use disorder¹ and the CDC reports that 46,802 people died in 2018 from opioid overdoses, up from 21,088 in 2010.²

How does Virginia fare where opioid fatalities are concerned? Graph 1 plots age-adjusted³ death rates from opioid overdoses in Virginia and the United States between 2000 and 2018. One can see that both the Commonwealth and national rates have more than quadrupled since 2000. If there is any comfort to be had, it is that Virginia's rate grew only 6% between 2017 and 2018, the latest year for which these data are available.

As unfortunate as Virginia's experience with opioid abuse has been, the Commonwealth fares relatively well in this regard compared to its neighbors. Graph 2 presents age-adjusted opioid death rates for Virginia and its four neighboring states. Virginia's death rate consistently has been the lowest in this group. West Virginia stands out like the proverbial

sore thumb, although it must be noted that rates in all five states have been climbing steadily. We will probe the reasons for this in a subsequent section.



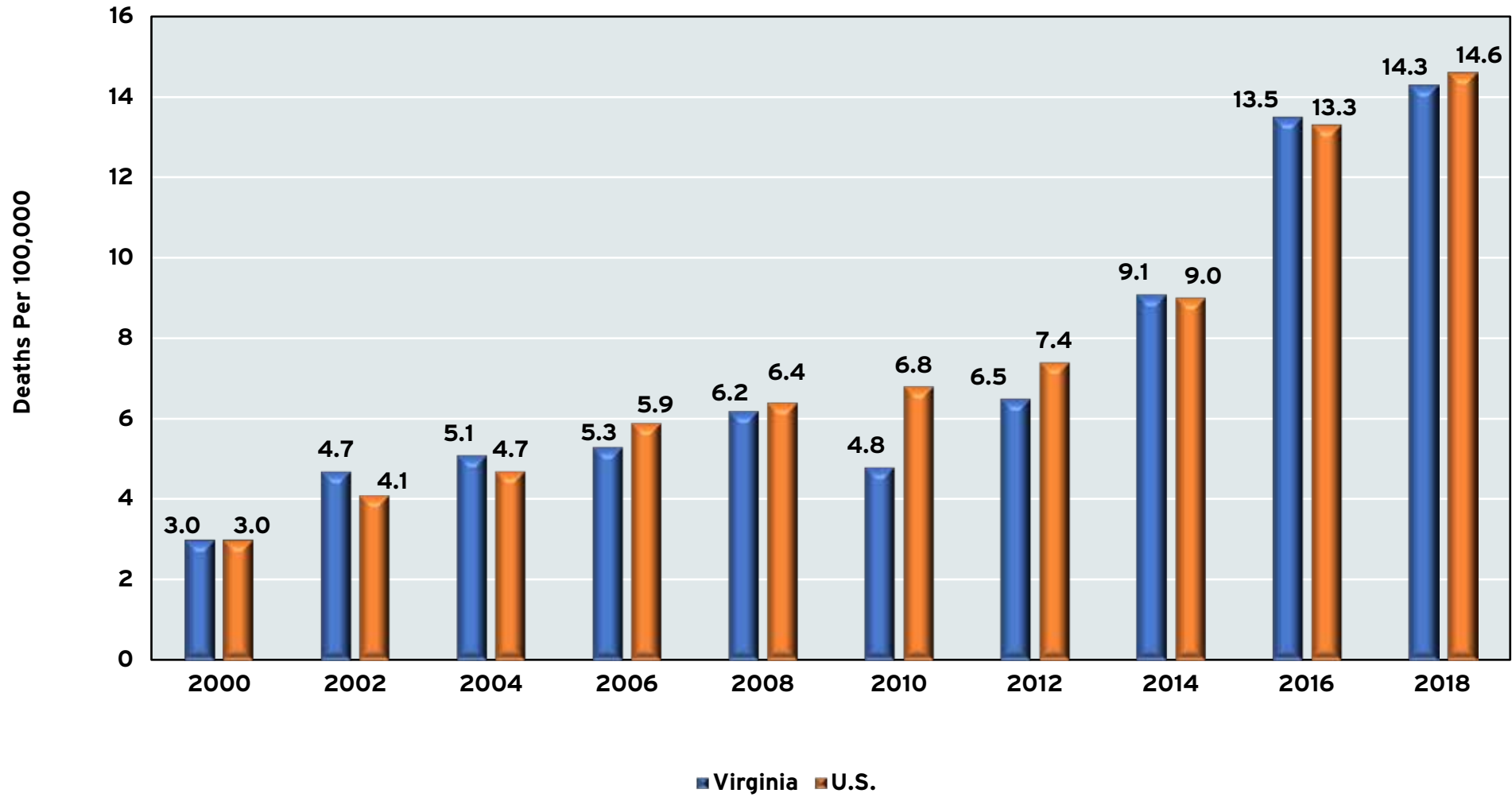
1 Stacy Weiner, "COVID-19 and the Opioid Crisis: When a Pandemic and an Epidemic Collide," AAMC (July 27, 2020), www.aamc.org/news-insights/covid-19-and-opioid-crisis-when-pandemic-and-epidemic-collide.

2 Centers for Disease Control and Prevention, "Drug Overdose Deaths," www.cdc.gov/drugoverdose/data/statedeaths.html.

3 Because people of different ages (for example, those 20 to 35) behave differently than those who are very young or very old, it is necessary to adjust opioid death rates for changes in the age distribution of the population in order to make the rates comparable between years and between states. This adjustment makes the opioid death rate for West Virginia (where 20.5% of the population is aged 65+) comparable to that in Virginia (where only 15.9% of the population is aged 65+). [U.S. Census Quick Facts, www.census.gov/quickfacts]

GRAPH 1

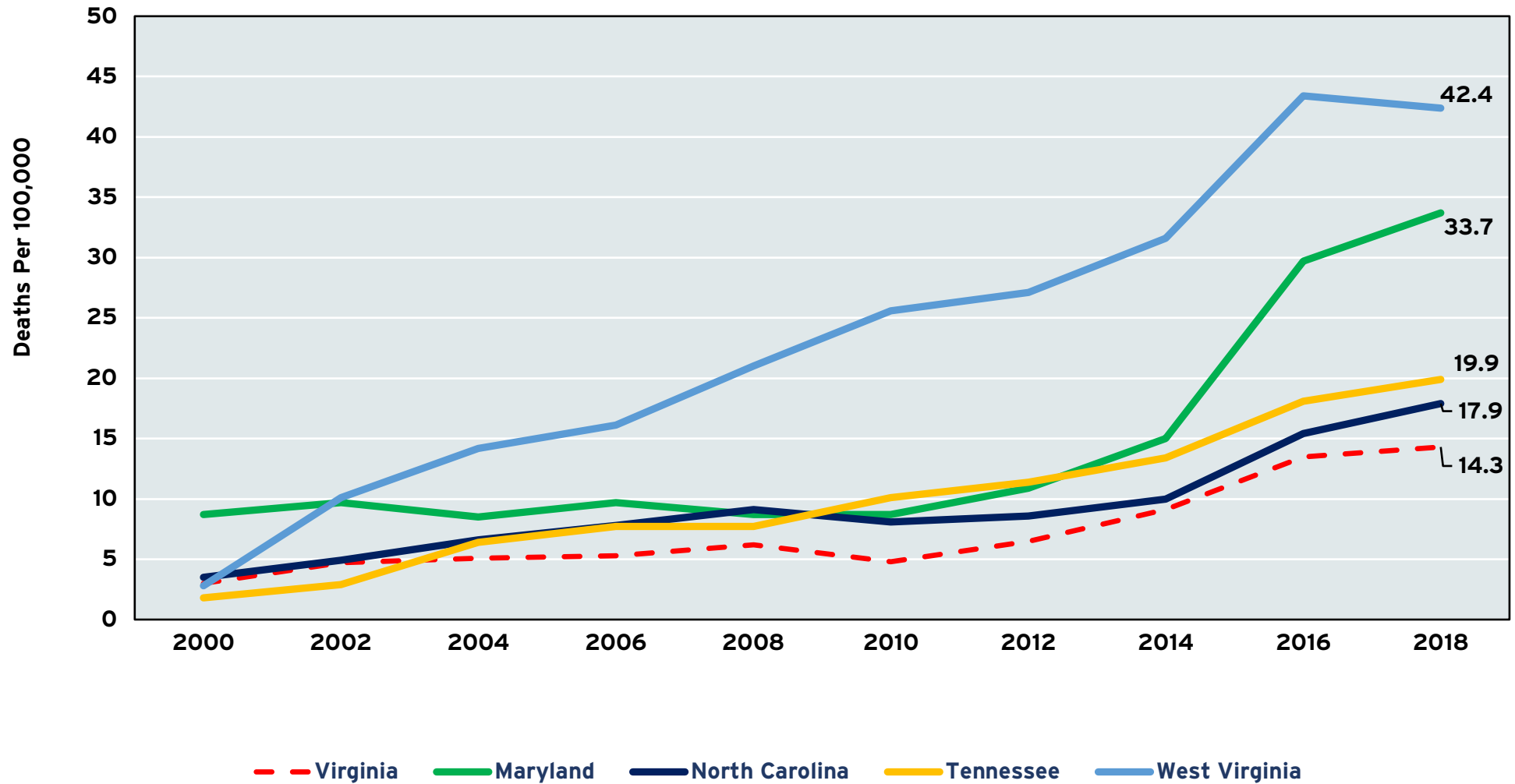
**AGE-ADJUSTED OPIOID OVERDOSE DEATH RATES: UNITED STATES AND VIRGINIA, 2000-2018
(PER 100,000)**



Source: Centers for Disease Control and Prevention, "Drug Overdose Deaths," www.cdc.gov/drugoverdose/data/statedeaths.html

GRAPH 2

AGE-ADJUSTED OPIOID OVERDOSE DEATH RATES: VIRGINIA AND SURROUNDING STATES, 2000-2018
(PER 100,000)



Sources: Centers for Disease Control and Prevention, "Drug Overdose Deaths," www.cdc.gov/drugoverdose/data/statedeaths.html, and the Kaiser Family Foundation, www.kff.org/other/state-indicator/opioid-overdose-death-rates

Opioids Versus Other Drugs

Opioids, which are derived from a milklike substance extracted from opium plants, have a variety of legitimate pain-reducing uses in medicine and dentistry. Virtually every adult American has benefited from the pain-reducing effects of opioids, for example, in the dentist's chair. Opioids, however, are not the only drug whose misuse can lead to death. Methamphetamines ("meth") and cocaine ("coke") also must be considered, having accounted, historically, for 20% to 30% of drug overdose deaths. As Graph 3 discloses, however, opioids have been growing in lethal importance (relatively speaking) and in 2018 accounted for 83.6% of all drug overdose deaths in Virginia, up from 60.7% in 2000.

The 83.6% statistic is an important one to remember because when the CDC reports drug abuse data for cities and counties, it usually focuses on drug overdose death rates overall, rather than on opioid death rates specifically. Thus, most of the city- and county-level data we report here relate to drug overdose death rates overall rather than the narrower category of opioid drug overdose death rates. It will suffice for us to note that five of every six drug overdose deaths in Virginia are attributed to opioids.

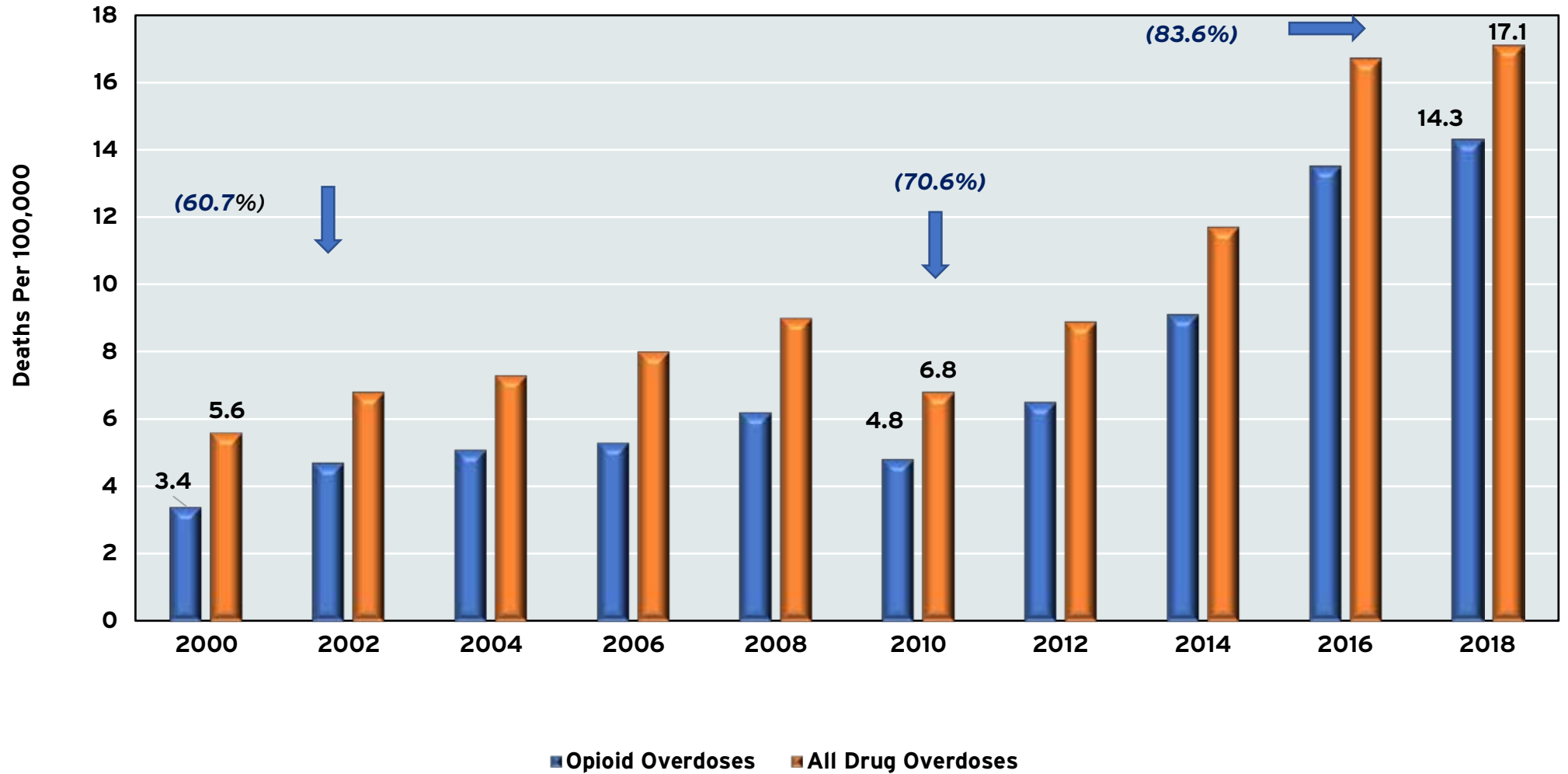
With the previous distinction between overall drug overdose death rates and opioid death rates in mind, Graph 4 presents drug overdose death rates for specific Virginia cities and counties averaged over 2016-2018. It is immediately obvious that tremendous differences exist among Virginia cities and counties with respect to drug overdose death rates. Explaining these differences is one of the primary purposes of this chapter and we begin that task in the next section.

Opioids are substances derived from opium poppy plants and have been cultivated throughout the world for thousands of years. Opium use easily can lead to physical and psychological addiction. Opioids such as heroin and codeine bind to chemical receptors in the brain; both dull pain and produce "feel good" sensations. However, continued use of an opioid leads to rising tolerance for it, and users find they need ever-larger quantities to experience the same effect. This leads to addiction. There are, of course, many legitimate uses of opioids, such as pain control in the dentist's chair and in myriad medical situations, including surgery.



GRAPH 3

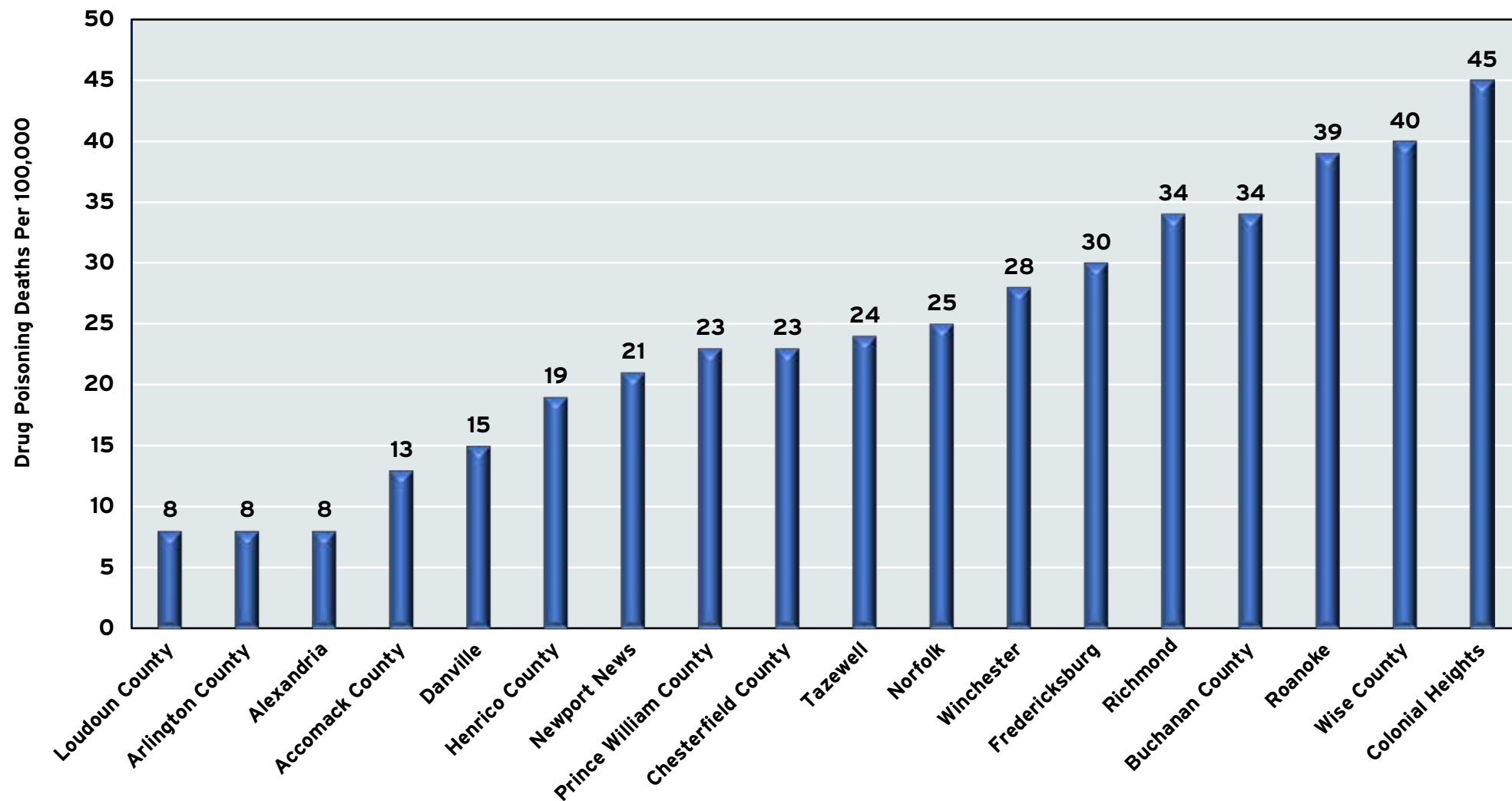
AGE-ADJUSTED DRUG OVERDOSE DEATH RATES AND OPIOID OVERDOSE DEATH RATES:
VIRGINIA, 2000-2018 (PER 100,000)



Sources: Centers for Disease Control and Prevention, "Drug Overdose Deaths," www.cdc.gov/drugoverdose/data/statedeaths.html, and the Kaiser Family Foundation, www.kff.org/other/state-indicator/opioid-overdose-death-rates

GRAPH 4

**NUMBER OF DRUG POISONING DEATHS PER 100,000:
SELECTED VIRGINIA CITIES AND COUNTIES, 2016-2018**



Source: Robert Wood Johnson Foundation, "County Health Rankings and Roadmaps: Drug Overdose Deaths," www.countyhealthrankings.org/app/virginia/2020/measure/factors/138/data

Explaining Drug Overdoses And Deaths

We think we have learned how to deal with COVID-19 and similar infections: wear a mask, maintain distance, keep your fingers away from your face and mouth, and wash your hands. No such recipe has emerged to deal with our ongoing opioid problems. This reflects the reality that it is not possible to point to a single cause that generates opioid addiction and fatal overdoses.

Instead, a variety of hypotheses exist with respect to the conditions that lead to drug overdoses, including those involving opioids. Let us examine them in greater detail.

Deaths Of Despair?

The most often cited explanation for opioid abuse is that it arises from depressed economic conditions. This has become known as the “deaths of despair” hypothesis and is most prominently associated with researchers Angus Case and Anne Deaton.⁴ In this hypothesis, people without jobs attempt to soothe their disappointing circumstance by using opioids. They are joined by others who are employed but deem their work too low-paying or uninteresting, and consequently look to opioids to add some excitement to their lives. For a few hours or days, they can transport themselves to a different reality.

The deaths of despair explanation for opioid abuse makes intuitive sense and has some empirical validity. Few would argue that economic misery does not have something to do with opioid death rates. Nevertheless, as Graph 5 shows, the economic misery argument really does not hold for what has happened in Virginia. Note that economic misery (as measured by the annual average rate of unemployment) and opioid death rates

per 100,000 Virginians essentially move in opposite directions. Initially, between 2008 and 2010, death rates fell even though unemployment was rising. If we change our focus to 2011 to 2018, we can see that falling unemployment rates did not result in lower death rates. In fact, the opposite occurred – death rates accelerated upward.

Why do we observe this behavior? Because multiple factors other than economic misery influence opioid drug use. The relationship is far more complex than some believe.⁵ Let’s consider some of the other factors that motivate drug abuse.

Researchers have learned that a variety of factors might come into play, including one’s physical location; excessively liberal prescription practices by physicians and others that make it too easy for abusers to obtain large supplies of opioids; government social safety net programs that may provide disincentives for some people to work; demographic characteristics such as race, age and marital status; the availability of quality medical care to deal with drug overdoses, including access to antidote drugs such as naloxone; the often subpar health conditions of opioid users; well-meaning but erroneous law enforcement and penal policies that imprison too many people; and local and regional cultures. These “other” factors, individually or in some combination, are at least as important in determining drug overdose behavior as is economic misery.

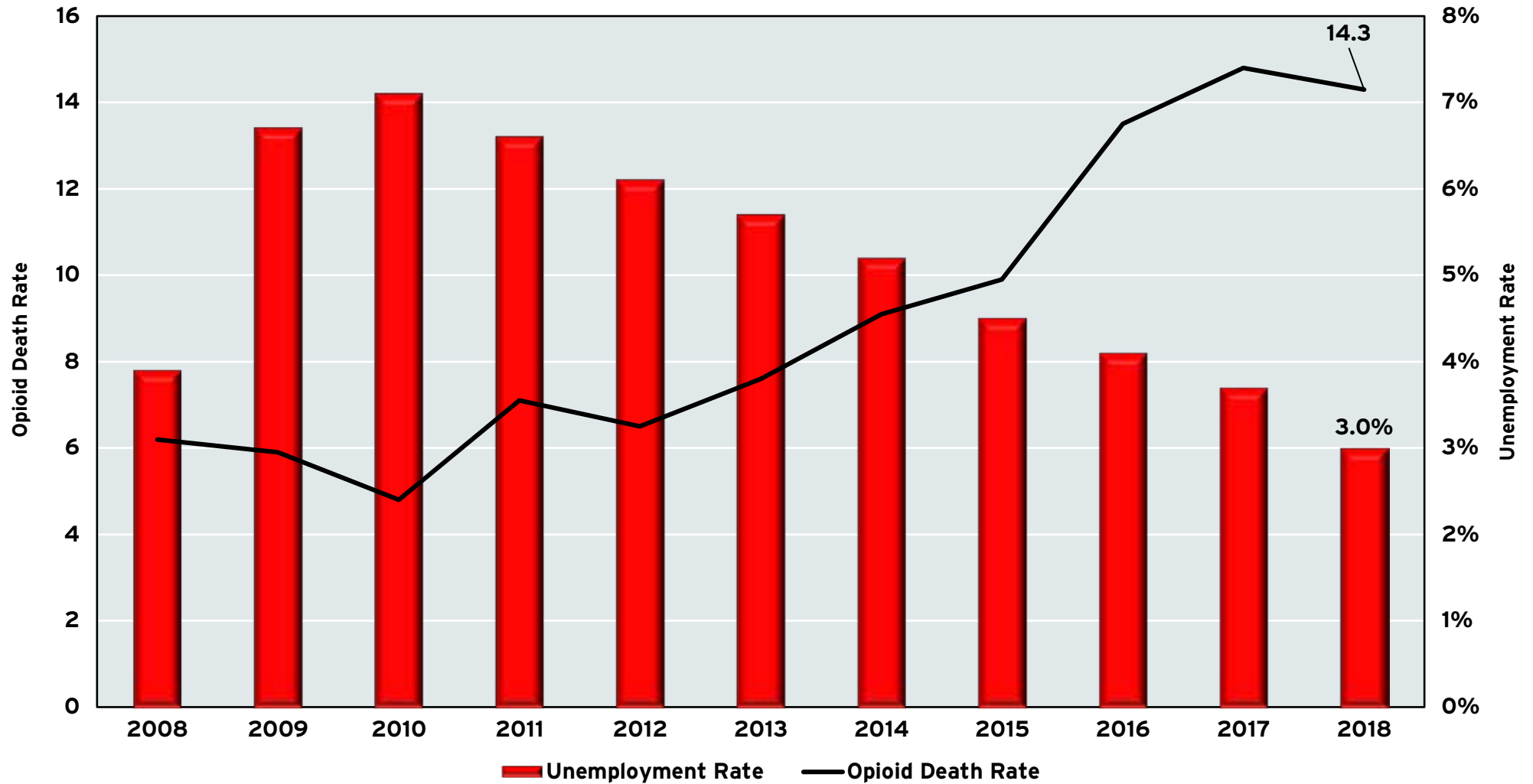
Thus, in contrast to the prevailing wisdom of several years ago, the emerging consensus today is that adverse economic conditions are only one cause among many that result in deaths from opioid abuse. This change in understanding has immediate policy implications. It would be a mistake for us to assume that if only we could diminish the rate of unemployment in Southwest Virginia (where drug overdose death rates are elevated), we would be rewarded with a significant decline in opioid abuse and subsequent deaths in that region. Improved economic conditions would help, but as we will see, the phenomena that spur opioid abuse extend well beyond unemployment and income.

⁴ Angus Case and Anne Deaton (2015), “Rising Morbidity and Mortality in Midlife Among White Non-Hispanic Substance Use Disorders in the United States,” *Proceedings of the National Academy of Sciences*, 112(49), 15078-15083; and Case and Deaton (2017), “Mortality and Morbidity in the 21st Century,” *Brookings Papers on Economic Activity*, 2(1), 397-476.

⁵ Two Old Dominion University researchers associated with the Dragas Center for Economic Analysis and Policy are among three co-authors of a journal article that deals with the determinants of opioid and drug overdose death rates in Virginia in considerable detail. See Barbara Blake-Gonzalez, Richard J. Cebula and James V. Koch, “Drug Overdose Death Rates: The Economic Misery Explanation and Its Alternatives,” *Applied Economics*, September 2020.

GRAPH 5

THE RELATIONSHIP BETWEEN THE OPIOID DEATH RATE PER 100,000 AND UNEMPLOYMENT RATES:
VIRGINIA, 2008-2018



Sources: Opioid death rates from the Centers for Disease Control and Prevention, "Drug Overdose Deaths," www.cdc.gov/drugoverdose/data/statedeaths.html; unemployment rates from FRED, the Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/LAUST510000000000003A>

A Look At The Supply Side: Prescriptions And The Pharmacy Market Structure

As one medical observer put it in December 2015, “Although physicians have a moral and ethical duty to treat pain, we may be dispensing more medication than necessary.”⁶ Graph 6 reveals, however, the proverbial horse already had departed the barn by 2015. In West Virginia, for example, 146.9 opioid prescriptions per capita were written in 2009 (compared to 79.5 per capita nationally). There is general agreement that this facilitated the development of West Virginia’s high opioid death rate.⁷

The same general circumstance – indeed, the analogous lesson – applies to other states, including Virginia. After public attention was focused on the enabling nature of the prescribing habits of physicians and other prescribers, and some laws passed to track both prescribers and those receiving the prescriptions, the number of opioid prescriptions written in the Commonwealth has tumbled downward. In Virginia, this number peaked at 79.6 per capita in 2012 and fell to 52.9 by 2017 (the latest year for which these data are available). Large variations in prescription-writing habits remain, however, within the Commonwealth. In 2017, 345.1 prescriptions per capita were written in the city of Galax, but only 31.1 in Loudoun County.

In defense of those professionals who write prescriptions, it may be difficult for them to know if their patient truly needs an opioid because sensations of pain or an inability to sleep are self-reported by individuals and difficult to track. Nor will the prescribing professional necessarily know if the opioids are used for the purposes prescribed or instead sold on the street, where the value of a pill may increase 5 to 15 times. A single oxycodone pill, for example, may cost \$6 at the pharmacy but sell for \$12 to \$40 on the street.⁸ One cannot ignore the financial incentives present

for people to sell legally acquired opioids. Nevertheless, the relevant point is that overly generous prescription practices must bear some responsibility for facilitating the opioid epidemic.⁹

A related consideration focuses on pharmacy market structure and specifically considers how much competition there is among pharmacies in a specific city or county, as well the extent to which the pharmacies belong to a “chain” such as Walgreens, Walmart or CVS. Do the chains charge lower or higher prices? Do they track opioid prescription recipients more thoroughly than a local pharmacy that may operate on the basis of long-standing local relationships? Recent evidence does not provide conclusions concerning pricing but does suggest that drug overdose death rates are lower in cities and counties where the presence of the chains is large. Perhaps chain pharmacies make it more difficult for an opioid abuser to obtain multiple prescriptions or receive heavier dosages.¹⁰

6 Anita Gupta, “How Physicians Can Curb the Prescription Opioid Epidemic,” *MedPage Today’s KevinMD.com* (Dec. 31, 2015), www.kevinmd.com/blog/2015/12/physicians-can-curb-prescription-opioid-epidemic.html.

7 CDC (2020), “U.S. Opioid Prescribing Rate Maps,” www.cdc.gov/drugoverdose/maps/rxrate-maps.html.

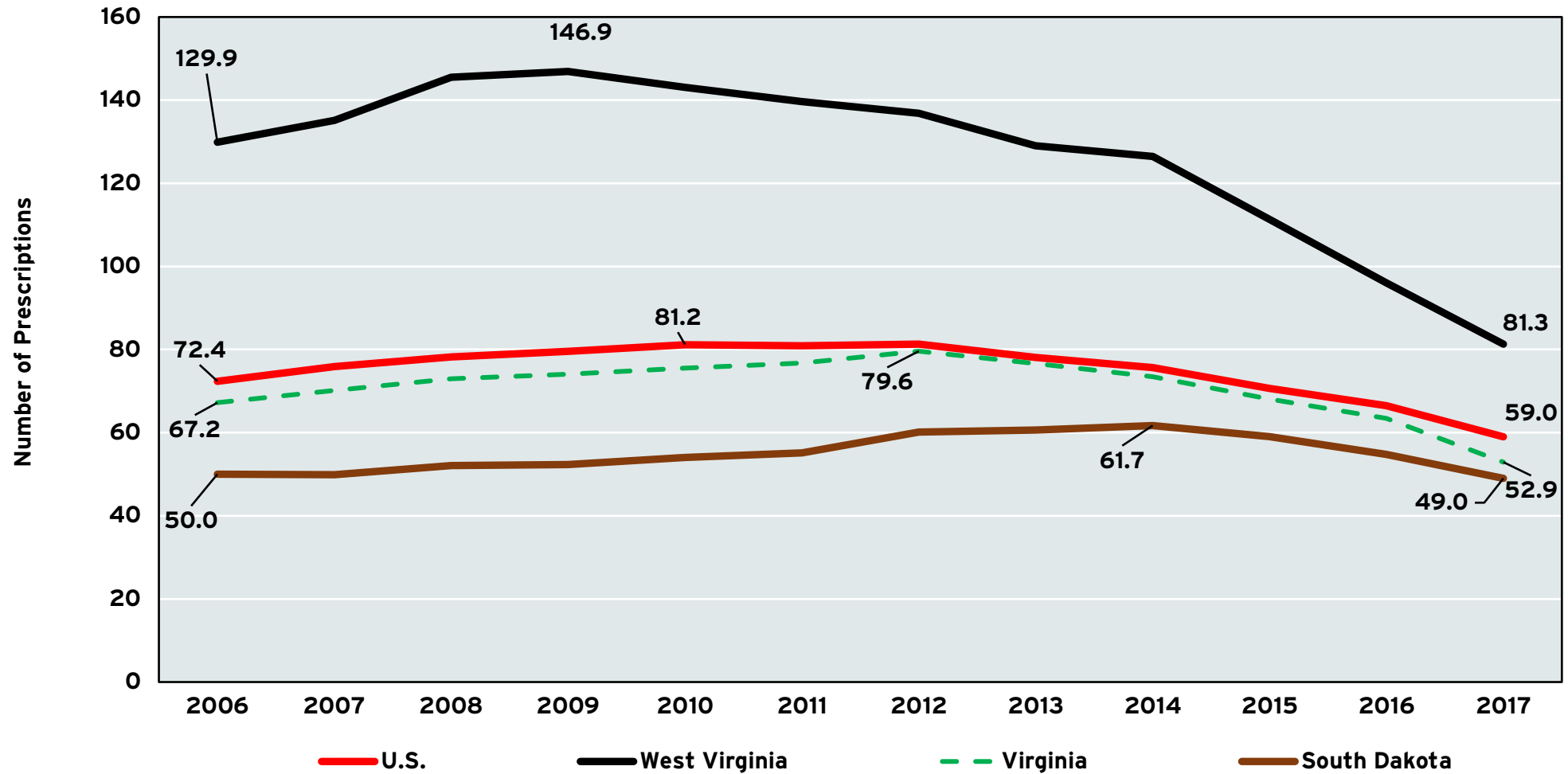
8 Rehab Spot, “The Annual Cost of Addiction to Prescription Opioids: \$3,500 to \$70,000+,” *Rehab Spot* (accessed Feb. 27, 2020), www.rehabspot.com/treatment/paying-for-rehab/cost-of-addiction.

9 This is among the empirical conclusions of Blake-Gonzalez et al., cited above.

10 This also is among the empirical conclusions of Blake-Gonzalez et al.

GRAPH 6

**NUMBER OF LEGAL PRESCRIPTIONS FOR OPIOIDS WRITTEN:
VIRGINIA AND OTHERS, 2006-2017**



Source: Centers for Disease Control and Prevention (2020), "U.S. Opioid Prescribing Rate Maps," www.cdc.gov/drugoverdose/maps/rxrate-maps.html

Is The Social Safety Net Too Generous?

The President's Council of Economic Advisers has made strong assertions that rising social safety net funding and more widespread health insurance coverage have made it easier for opioid abusers to pursue their habits.¹¹

When it talks about social safety net funding, the council has in mind items such as unemployment compensation benefits, disability payments and Supplementary Nutrition Assistance Program (SNAP, or "food stamps") benefits.

Some startling differences exist in the provision of social safety net support throughout Virginia. Disability payments provide an apt illustration. In 2017, 24.6% of residents, ages 15-64, in Southwest Virginia's Scott County were receiving some form of disability payment from a governmental unit, while in Fairfax County only 5.1% were receiving such assistance. The attention-getter is that the drug overdose death rate per 100,000 individuals was 27.1 in Scott County, but only 12.4 in Fairfax County.

Is there cause and effect between disability status and opioid death rates? The evidence is mixed. Reputable economic studies have revealed some disincentive effects attached to the presence and expansion of social safety net programs, but these studies nearly always have focused on labor force participation and work hours rather than opioid use. The Blake-Gonzalez et al. study cited earlier addresses the impact of disability status and found only modest evidence of its importance with respect to opioid death rates. However, this is a relationship that merits more research.

Is Risky Work A Factor?

Some jobs carry more risk than others. The Bureau of Labor Statistics reported in 2018 that the chance someone will die from an accident at

work is only 3.5 per 100,000 full-time equivalent workers, but a hefty 34.9 per 100,000 for those in the extractive industries, such as mining.¹² In 2018, more than 15% of the work force in Buchanan County, Virginia, was involved in mining or mining-related work.¹³

Riskier jobs plausibly lead to more frequent worker injuries, which in turn often lead to increased use of opioids to counteract the pain associated with the injuries. And this, in turn, may push some of those injured into opioid abuse, leading to their deaths. We tested this proposition by means of a multivariate statistical analysis in which one of the considerations was the percentage of workers in a city or county involved in mining and similarly risky employment. Holding constant a host of other variables such as education and unemployment, we found a strong positive relationship between the drug overdose death rate and the degree to which physically risky employment is present.

Note here that it is not the absence of employment per se that is the problem but instead the nature of the employment. Once again, the "deaths of despair" hypothesis does not deal effectively with some of the nuances that exist in the real world.

11 Council of Economic Advisers (2019), "The Role of Opioid Price in the Evolving Opioid Crisis," www.whitehouse.gov.

12 Bureau of Labor Statistics, "National Census of Fatal Occupational Injuries in 2018," <https://www.bls.gov/news.release/pdf/cfoi.pdf>.

13 Data USA, Buchanan County, Virginia, <https://datausa.io/profile/geo/buchanan-county-va#economy>.

The Urban-Rural Dichotomy

Two derivatives of the deaths of despair explanation pertaining to drug overdose death rates focus on aspects of geographic location. One version of the location hypothesis asserts that people in rural locations have fewer opportunities for work and cultural activities and, as such, boredom pushes them to opioid abuse. A second version examines the length of employee commutes and maintains that the prospect of a long commute can discourage employment and lead people to opioids. With respect to this latter assertion, it is worth noting that while some very long commuting times exist in rural locations in Virginia, they also are present in metropolitan areas such as Northern Virginia, Hampton Roads and Richmond.

Our statistical analysis found evidence in favor of both propositions (holding other factors such as unemployment constant). Rural locations (as measured by population per square mile) appear to spur drug usage that leads to higher overdose death rates (other things held equal). Longer commutes do likewise.

Table 1 displays average population densities and average commuting times for a nonrandom selection of Virginia cities and counties along with their drug overdose death rates in 2017. These jurisdictions were chosen deliberately to demonstrate that one cannot automatically assume a more rural jurisdiction will have a higher drug overdose death rate, or that shorter commutes necessarily result in lower drug overdose death rates. The lesson to draw once again is that drug overdose death rates (for which opioids have an approximate 80% weighting) are the product of many different interacting factors and available evidence does not support explanations that focus on a single factor.

TABLE 1

AVERAGE ONE-WAY COMMUTING TIMES AND DRUG OVERDOSE DEATH RATES: SELECTED VIRGINIA CITIES AND COUNTIES, 2017

| City or County | Average Population Density Per Square Mile | Average Minutes Daily Commute to Job, One-Way | Drug Overdose Death Rate, 2017 |
|-----------------------|--|---|--------------------------------|
| Alexandria | 10,694 | 37.8 | 11.1 |
| Buchanan County | 43 | 29.7 | 49.1 |
| Fauquier County | 107 | 40.0 | 38.6 |
| Prince William County | 1,381 | 39.6 | 16.1 |
| Virginia Beach | 1,839 | 23.7 | 21.6 |
| Charlottesville | 4,678 | 17.0 | 16.0 |
| Lynchburg | 1,655 | 17.5 | 18.0 |
| Radford | 1,824 | 17.8 | 12.6 |
| Richmond | 3,788 | 21.6 | 41.5 |
| Shenandoah County | 85 | 31.0 | 32.0 |

Sources: Federal Reserve Bank of St. Louis (FRED) for population; U.S. Census Quick Facts for square mile sizes; Centers for Disease Control and Prevention for death rates

The Impact Of COVID-19 On Drug Overdose Behavior

How has COVID-19 affected drug overdose behavior and drug overdose death rates? This is a vital question. Has the loss of employment caused by COVID-19 and the isolation of individuals in their living spaces altered their drug-related behavior? It seems plausible that COVID-19 has changed some behavior but the nature of the drug-related data produced by the CDC does not enable us to make such a judgment because the published versions of these data are annual in nature and typically appear with a two-year lag. Thus, if we were to rely only on CDC data, it would be 2022 before we would be able to detect any impacts that COVID-19 is having on drug-related behavior.

The Centers for Disease Control and Prevention (CDC) has collected drug overdose data for many years and maintains an open website that makes it possible for anyone to access those data, which are primarily annual in nature. However, other nongovernmental organizations, such as the National Opinion Research Center at the University of Chicago (NORC) and the Kaiser Family Foundation, perform a valuable public service by slicing, dicing and presenting the CDC's drug overdose data in forms that can be more easily understood. NORC and the Kaiser Family Foundation also excel at connecting drug overdose data to other relevant data, for example, unemployment rates, median household income and educational attainment.

Fortunately, another very promising and much more immediate source of data has been developed by the Overdose Detection Mapping Application Program (ODMAP), a federally sponsored initiative that collects drug-related data from ambulance teams, hospitals and police. ODMAP information is collected and assembled on a monthly basis and therefore

provides immediate signals concerning trends in drug overdose behavior. While these data are not as clean as the CDC's annual data because of variations in local reporting practices, they have opened new vistas in terms of our ability to interpret what is happening in the drug overdose arena.

Graph 7 compares the number of drug overdoses reported to ODMAP by 1,201 local agencies across the United States between January and May 2020 to the analogous numbers they reported in the comparable months in 2019. These data suggest that the COVID-19 pandemic is leading more people to overdose on drugs. The pop sociology explanation for this is that unemployment, physical isolation, lack of social contacts and general anomie have spurred people to increase their use of a variety of drugs, including alcohol and opioids. Thus, it has been reported that alcohol sales nationally rose more than 25% in the first half of 2020 and that an analysis of 500,000 urine tests from a national sample revealed a 32% increase in nonprescribed fentanyl, a particularly deadly opioid that is 80 to 100 times as potent as morphine (<https://www.millenniumhealth.com/news/signalsreportcovid/>).¹⁴

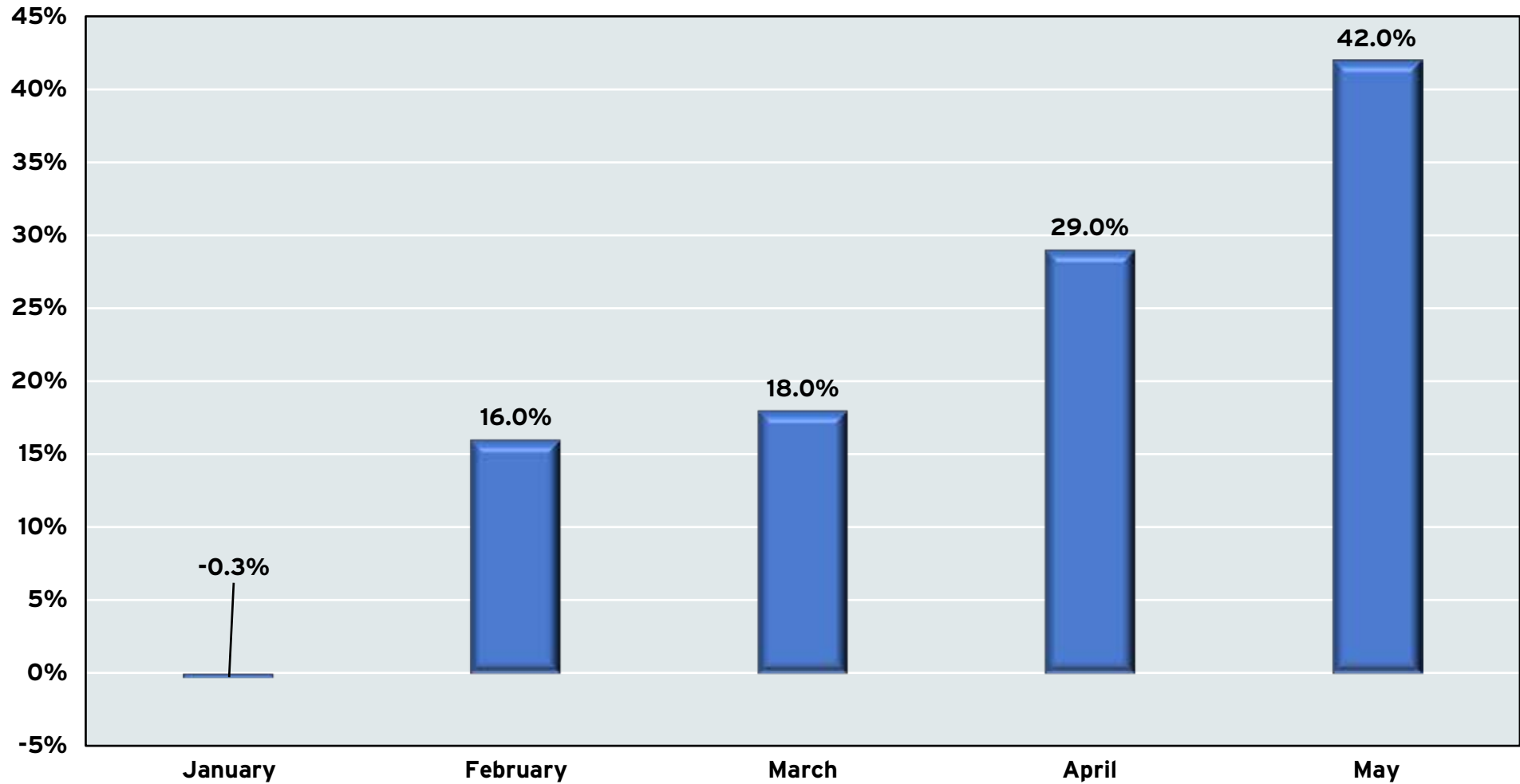
If these data are accurate, then a tentative conclusion is that COVID-19 is responsible, at least partly, for the recent upsurge in drug overdoses reported in the first months of 2020. However, we would urge caution in this regard and ask readers to refer back to Graph 5. It demonstrates visually that the unemployment rate and opioid death rate typically have moved in opposite directions in Virginia. Just as economic misery by itself cannot explain drug overdose behavior in Virginia, likely there are factors other than COVID-19 that are responsible for the increase in drug overdoses that occurred nationally in the first half of 2020.

If the drug and opioid abuse problem were viewed metaphorically as a machine, then this machine is one that has many different moving parts. Thus, it is an error to tie drug overdose behavior only to economic misery. The real world is more complicated than this – a distinction that often eludes those who write about drug overdose issues in the popular media. The factors that motivate an individual living in Fairfax County to use a powerful opioid such as fentanyl likely differ from those that spur the same behavior in Buchanan County in Virginia's coal country.

¹⁴ Stacy Weiner, "COVID-19 and the Opioid Crisis: When a Pandemic and an Epidemic Collide," July 27, 2020, <https://www.aamc.org/news-insights/covid-19-and-opioid-crisis-when-pandemic-and-epidemic-collide>.

GRAPH 7

**INCREASE IN REPORTED OPIOID OVERDOSES IN 1,201 JURISDICTIONS:
UNITED STATES, 2020 COMPARED TO 2019**



Source: William Wan and Heather Long, "Cries for Help": Drug Overdoses Are Soaring During the Coronavirus Pandemic," The Washington Post (July 1, 2020), www.washingtonpost.com/health/2020/07/01/coronavirus-drug-overdose/, based upon data from the Overdose Detection Mapping Application Program

Final Thoughts

Opioid abuse may be “out of sight, out of mind” for a majority of Virginians, but the preceding analysis tells us that our struggle to overcome opioid abuse continues. The good news is that it appears that the very rapid growth in drug overdose deaths we witnessed during the past decade may be over. The bad news is that COVID-19 may have halted this progress.

Readers of this chapter may not know anyone personally who is addicted to an opioid or another dangerous drug. Knowledgeable or not, however, readers will join all other citizens in bearing the costs of dealing with what still must be labeled an epidemic. The front lines in battling this epidemic are occupied primarily by local governments, nonprofit organizations and the hospitals and health providers that often must serve individuals without health insurance or other means to pay for the services they receive. The choices confronting these organizations are stark. They may choose to reallocate funds away from other needs (for example, K-12 education, public safety or cancer treatment), or perhaps subtly reduce the quality of the services they offer. Or, more visibly, they may choose to increase their tax rates and prices. There are no free lunches in this world.

Hardly a happy situation, but neither is the opioid epidemic that is responsible for this conundrum.





