

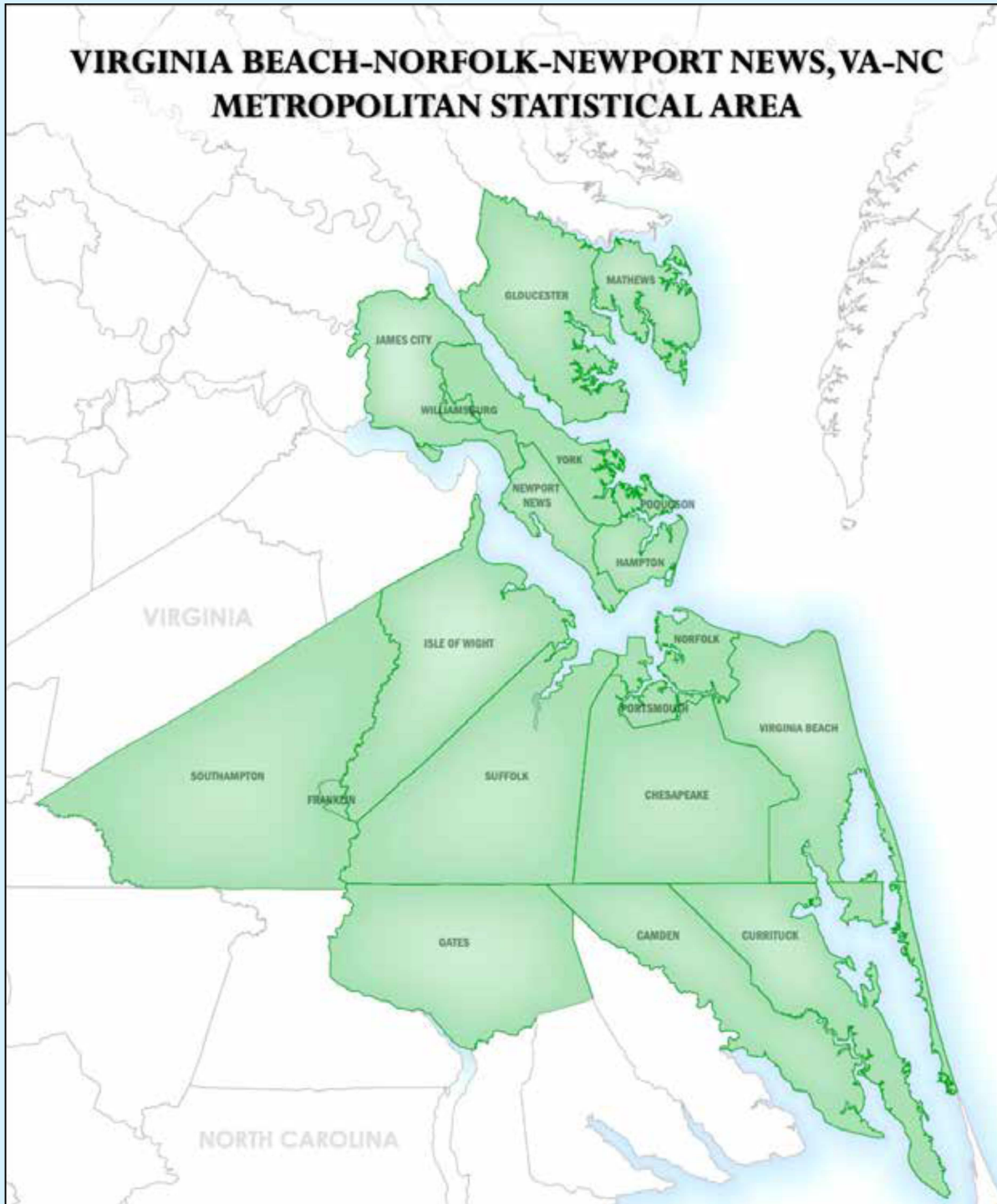
COVID-19



The State of the Region

HAMPTON ROADS 2020

**VIRGINIA BEACH-NORFOLK-NEWPORT NEWS, VA-NC
METROPOLITAN STATISTICAL AREA**



October 2020

Dear Reader:

This is Old Dominion University's 21st annual State of the Region 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 region, Commonwealth and nation. In consideration of the national conversation on race and inequality, we have included additional material to shed light on how race affects economic outcomes in Hampton Roads.

Hampton Roads plays a significant role in our nation's national security, provides college education to thousands of Virginians, is working to adapt to sea level rise and is culturally diverse. There are challenges, of course, but, as the adage goes, challenge and opportunity are two sides of the same coin. To adapt, improve and overcome, we must understand where we are and where we want to go. Our work seeks to contribute to this conversation without glossing over the challenges we face.

The 2020 State of the Region Report is divided into six parts:

A Shock to the System: COVID-19 and Hampton Roads

COVID-19 changed how we view the Hampton Roads economy. In January 2020, the region was projected to grow faster than the nation, there were more unfilled jobs than unemployed workers and boosts in defense spending brightened our economic future. By April, however, businesses were closing, jobs were being lost and residents were under a stay-at-home order. We assess the economic toll of the COVID-19 pandemic and examine prospects for the coming year.

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, those 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.

Anxiety and Stress in the Workplace

Workplace stress and anxiety cost the Hampton Roads economy more than \$1 billion in lost productivity and health care expenditures in 2019. We explore the economic impact of workplace anxiety, stress and depression. We highlight how COVID-19 has increased anxiety and taken a toll on African American and Hispanic households. We ask how businesses can help alleviate anxiety and stress in a time of economic uncertainty.

Food Insecurity in Hampton Roads

One in 10 residents of Hampton Roads was unsure where their next meal was coming from in 2018. Among children, food insecurity rates were even higher in the region. Food insecurity reduces workplace productivity and learning, and negatively impacts health. We discuss how public programs and regional foodbanks are working to address these problems in Hampton Roads.

The Kids Are Not All Right: Youth Mental Health in Hampton Roads

More and more young people, particularly teenagers, report that they are anxious or depressed – a trend that has only escalated since the outbreak of the COVID-19 pandemic. This chapter looks at the state of youth mental health and the accessibility of care in Hampton Roads. The \$224 million Children’s Hospital of The King’s Daughters mental health hospital now under construction will address an urgent need and place the region at the forefront of behavioral and mental health care for children.

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

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All 21 State of the Region Reports are available at www.ceapodu.com. A limited number of printed copies of the 2020 State of the Region Report are available for purchase for \$50 each. 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

Jefferson Lab Ponders Its Future

While many of Hampton Roads’ K-12 students are familiar with this federal laboratory’s support for STEM education in the region, many residents would be surprised to know the region is home to a laboratory that delves into questions about the very nature of the universe. Research conducted at the Thomas Jefferson National Accelerator Facility in Newport News is not only being used to battle cancer but also to produce supercooled materials which, one day, may lead to breakthroughs in power generation and transmission and computing. We shed light on its impact and the potential for Jefferson Lab to increase its visibility.

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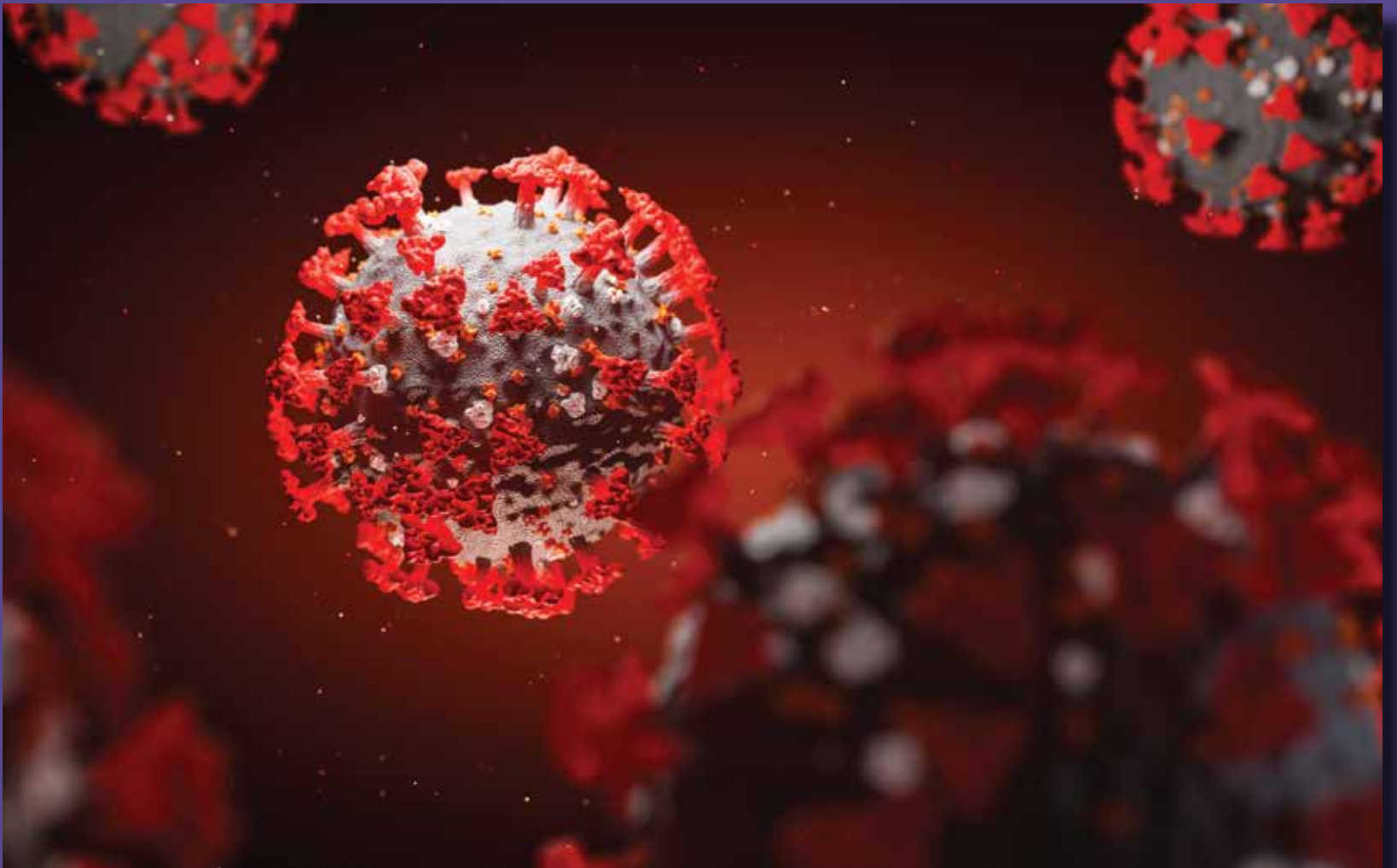
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A Shock To The System: COVID-19 And Hampton Roads



A SHOCK TO THE SYSTEM: COVID-19 AND HAMPTON ROADS

These are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their country; but he that stands by it now, deserves the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph.

– Thomas Paine, Dec. 23, 1776

In February 2020, one of most significant questions facing businesses in Hampton Roads was how to attract and retain employees in an increasingly tight labor market. With a record number of residents in the labor force and gainfully employed, Hampton Roads' unemployment rate approached 3%. The region was projected to grow for the fourth consecutive year, in part due to expected increases in the Department of Defense (DOD) budget. While there was worrisome news from China about a new respiratory virus, the United States had successfully responded to the influenza A H1N1pdm virus ("swine flu") in 2009 and the Ebola virus in 2014 with minimal disruption to society and the economy. The question in February was not whether Hampton Roads would grow, but whether its growth would exceed that of the Commonwealth and the nation.

Now, with the summer of 2020 behind us, looking back at the first two months of 2020 is an exercise in nostalgia. Pandemic, masking, self-isolation, social distancing, contact tracing and community spread now appear frequently in the lexicon. Although Hampton Roads and Virginia fared relatively well in the early months of the COVID-19 pandemic, the economic toll has been unprecedented. While some argue that we can eventually return to normal, we must face the fact that "normal" will likely involve masks, temperature checks and discussions of therapeutics and vaccines for months (if not years) to come. A complete recovery will likely take years and we should avoid wishful thinking about the coronavirus and the region's economic recovery.

COVID-19 has unwound many of the gains of the previous decade and thrown the fractures in the economy in sharp relief. Black or African American residents were more likely to be infected from the virus or lose their jobs than their white or Asian counterparts.¹

¹ We follow the U.S. Census Bureau's standards with regard to race or ethnicity. Individuals self-identify their race or ethnicity. For more information, see <https://www.census.gov/topics/population/race/about.html>.

Income and wealth inequities have left Black and Hispanic households with fewer resources to draw upon in the face of the ongoing recession. National data show that, when coupled with the ongoing protests in response to the death of George Floyd in Minneapolis, Black and Hispanic households have paid a more significant psychological toll than white or Asian households. We are witnessing an economic, social and public health shock the likes of which has not been seen in this country since the Great Depression.

In this chapter, we examine how Hampton Roads fared in the initial months of the COVID-19 pandemic. We highlight the shock to labor markets and discuss how businesses 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 the region's residents. Lastly, we consider what a recovery might look like and how long it could take.

COVID-19: The Pandemic Continues

While not as severely impacted as some localities in Florida, Georgia, North Carolina and other states in the initial months of the pandemic, Hampton Roads nevertheless experienced its share of infections and, unfortunately, deaths, from the COVID-19 virus. While some complained that Virginia emerged from its stay-at-home orders too quickly, the initial evidence in the summer of 2020 strongly supported the argument that states and localities should first do what they could to control the virus and then gradually reopen the economy. The question remains as to how vigilant the public will be in preventing the spread of the virus by wearing masks, social distancing and, if sick, staying home to reduce community spread. Regions that have successfully lowered infection rates remain at risk of spikes from complacency.

Graph 1 displays the seven-day moving average of new cases per day in Hampton Roads and Virginia from April to August 2020. While the average number of new cases held relatively steady from April through mid-June, we observed an increasing number of cases as the region moved into Phase 3 of reopening. Discussions with local health officials suggest that many younger residents treated the move into Phase 3 as a point at which social distancing, universal masking and other measures were no longer needed. As the number of coronavirus cases increased in the region, public debate shifted toward mask enforcement and whether schools should reopen for in-person instruction.

Graph 2 illustrates a more troubling trend that coincided with Phase 3 of the region's reopening. The COVID-19 polymerase chain reaction (PCR) test determines whether an individual is infected with the virus, while antibody tests determine whether an individual was infected with the virus.² If the ratio of positive PCR tests to all PCR tests is increasing, this is a signal that community transmission of the virus is growing and that more stringent measures need to be taken to control the spread of the virus.

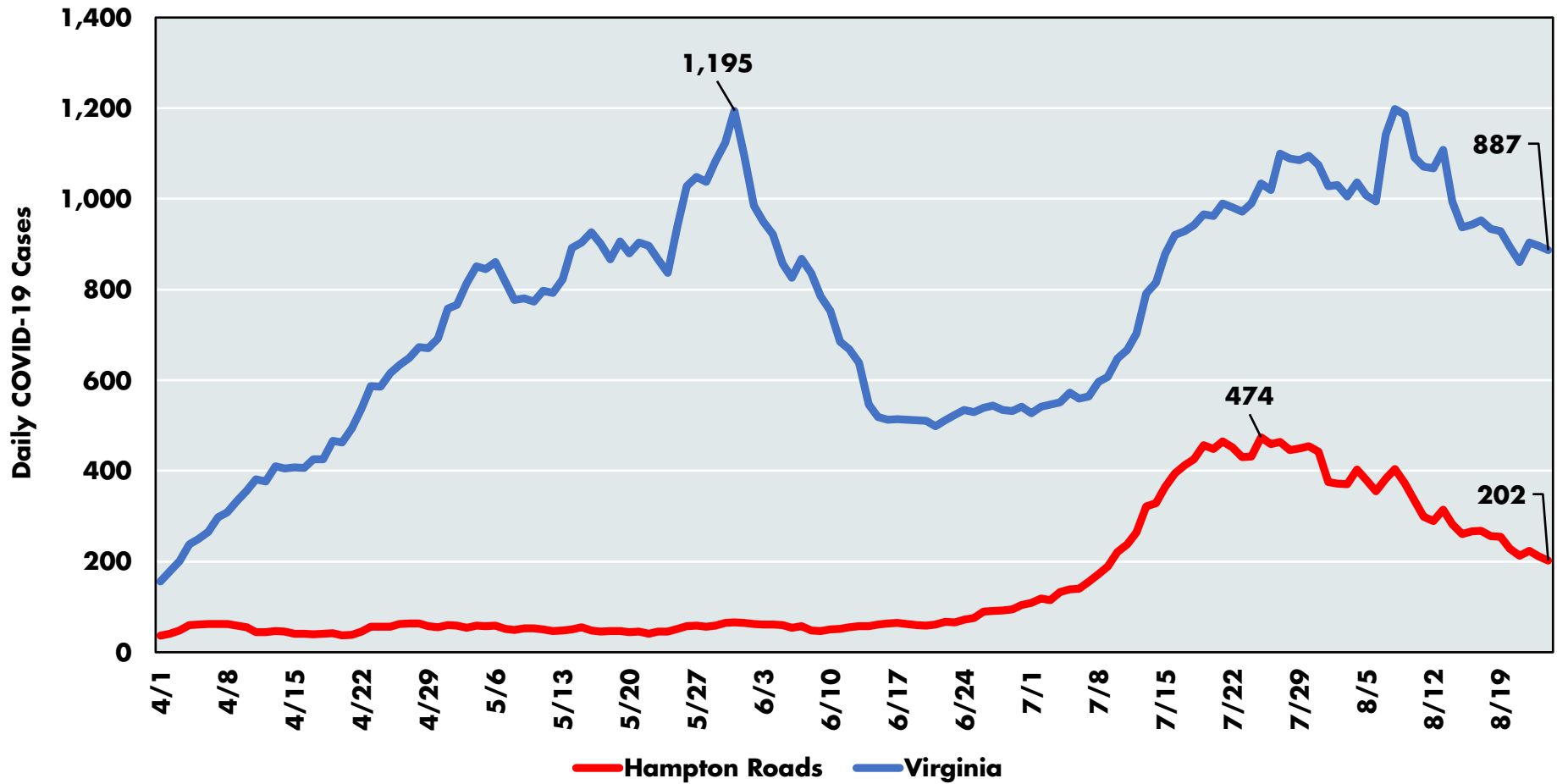
² The COVID-19 polymerase chain reaction (PCR) test is used to detect viral RNA. This is the best test available to indicate if an individual is currently infected with the SARS-CoV-2 virus. These tests are conducted using a nasal or nasopharyngeal swab to collect a specimen. Test results may remain positive for days to more than a week.

PCR test positivity plateaued in late July and then trended downward in August. The governor's order restricting some activities in the region, coupled with increased awareness, appeared to work (for now). The question is how Hampton Roads and other regions will fare in the fall, as college students return to campus and influenza season starts anew.



GRAPH 1

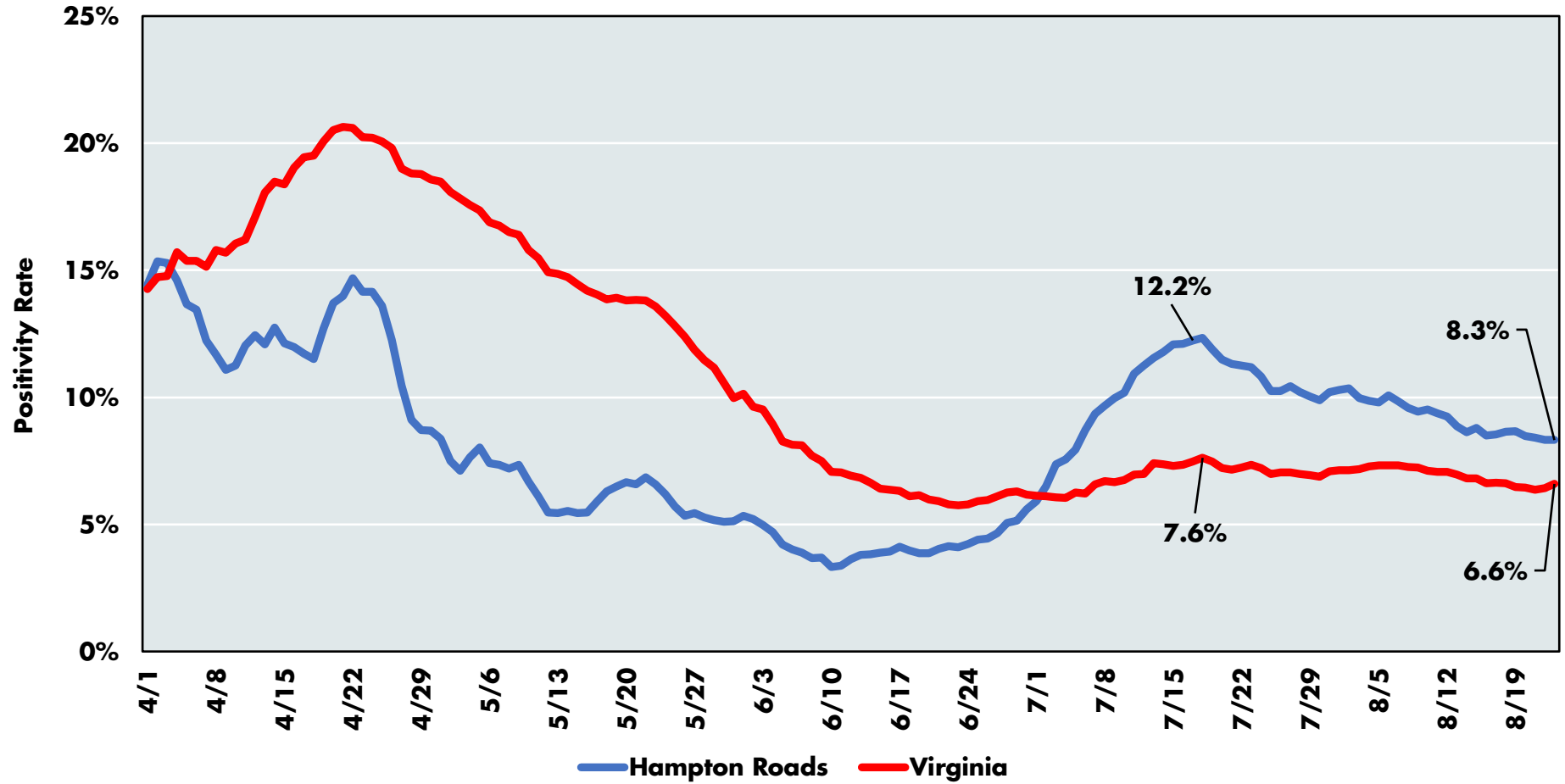
SEVEN-DAY MOVING AVERAGE OF DAILY COVID-19 CASES:
HAMPTON ROADS AND VIRGINIA, APRIL 1, 2020-AUG. 24, 2020



Sources: Virginia Department of Health and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are current as of Aug. 24, 2020 (date reflects reporting date).

GRAPH 2

SEVEN-DAY MOVING AVERAGE OF PCR TEST POSITIVITY:
HAMPTON ROADS AND VIRGINIA, APRIL 1, 2020-AUG. 24, 2020



Sources: Virginia Department of Health and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are current as of Aug. 24, 2020 (date reflects reporting date).

From Expansion To Collapse To Recovery: Labor Markets

The labor market in Hampton Roads is seasonal; that is, the number of people in the labor force looking for work or actively employed peaks in the summer and reaches its lowest point in the winter. As illustrated in Graph 3, the civilian labor force and individual employment peaked at 874,900 and 846,600, respectively, in July 2019. As Hampton Roads moved from summer into fall, the labor force and employment contracted as usual for that time of year, but then both expanded through March 2020. Hampton Roads appeared poised for another record year.

The onset of the COVID-19 pandemic, followed by social distancing measures and the closure of businesses, led to sharp contraction in economic activity in late March 2020. In April 2020, the civilian labor force contracted by 3% and individual employment fell by 11.6%. While employment recovered in May and June, approximately 59,000 fewer residents of the region were employed in June 2020 when compared to March 2020. It should be no surprise that the unemployment rate for Hampton Roads, which hovered around 3% for most of 2019, sharply increased in April 2020. With the recovery of employment in May and June, the unemployment rate fell to 9.6% in June, still well above the pre-COVID average (Graph 4).

The speed and scope of layoffs in Hampton Roads was unprecedented. Graph 5 presents initial unemployment insurance claims from March 2007 to June 2020. In the aftermath of the Great Recession, more than 10,000 workers in Hampton Roads filed an unemployment claim in August 2010. Yet, this pales in comparison to the coronavirus economic shock. **In April 2020, nearly 77,000 workers in Hampton Roads filed an initial unemployment claim, more than seven times the number at the peak of the Great Recession.**

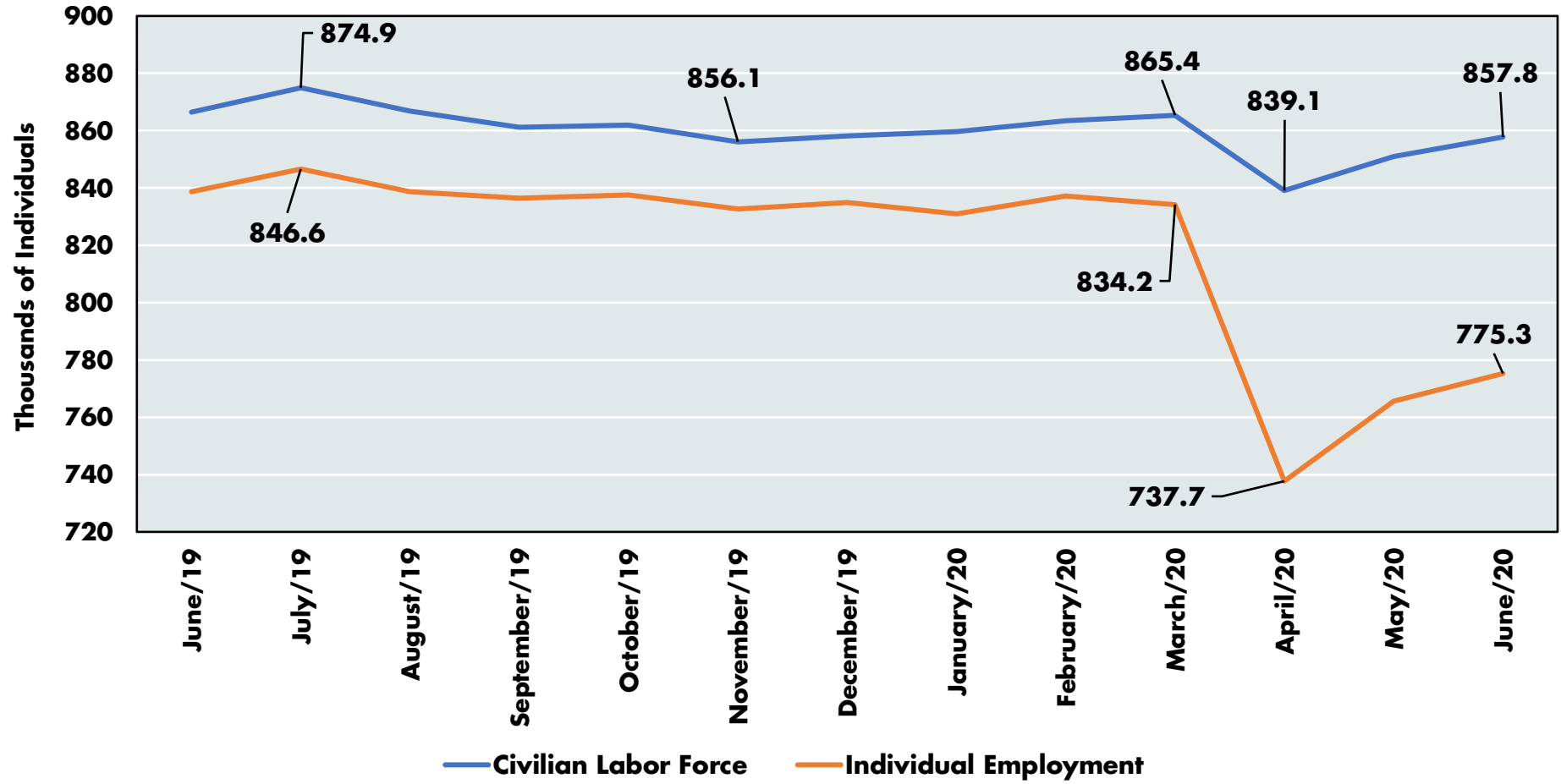
While initial claims declined in May 2020, the level of claims was three times higher than the previous record. The shock to the system was not just significant, it was unprecedented.

The economic challenge is not only the number of workers filing an initial claim, but also the number who remain on unemployment. If reopening led to many workers returning to work, we would see a rapid decline in continuing unemployment benefits. On the other hand, if economic activity had not returned to prepandemic levels, many workers would continue to collect unemployment benefits.

Initial claims represent the number of individuals who have filed a request for unemployment benefits after separation from an employer. Continuing claims, or what is known as insured unemployment, reflect those who have already filed their initial claim, had the claim 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 a given week.

GRAPH 3

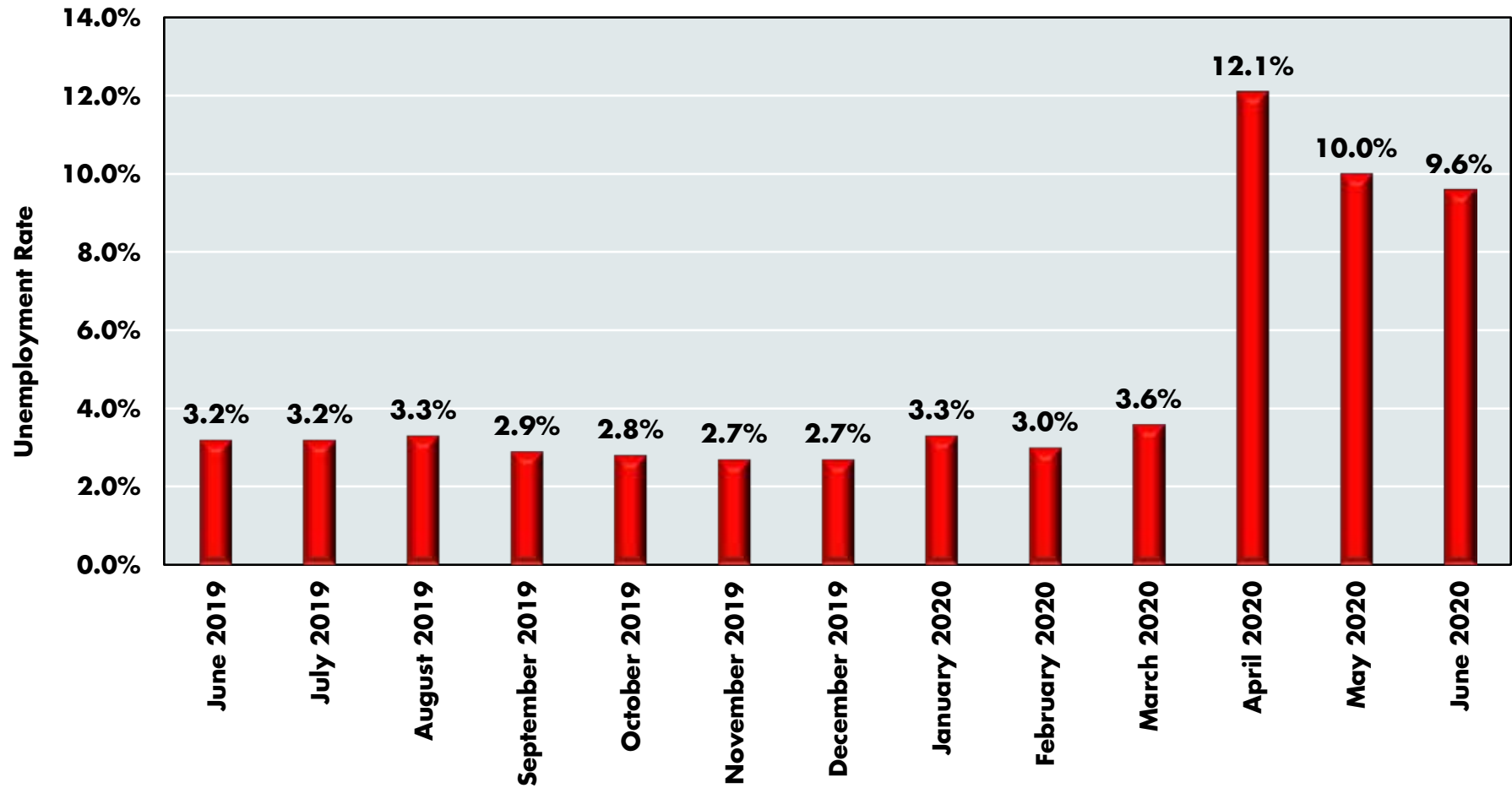
CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT:
HAMPTON ROADS, JUNE 2019-JUNE 2020



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

GRAPH 4

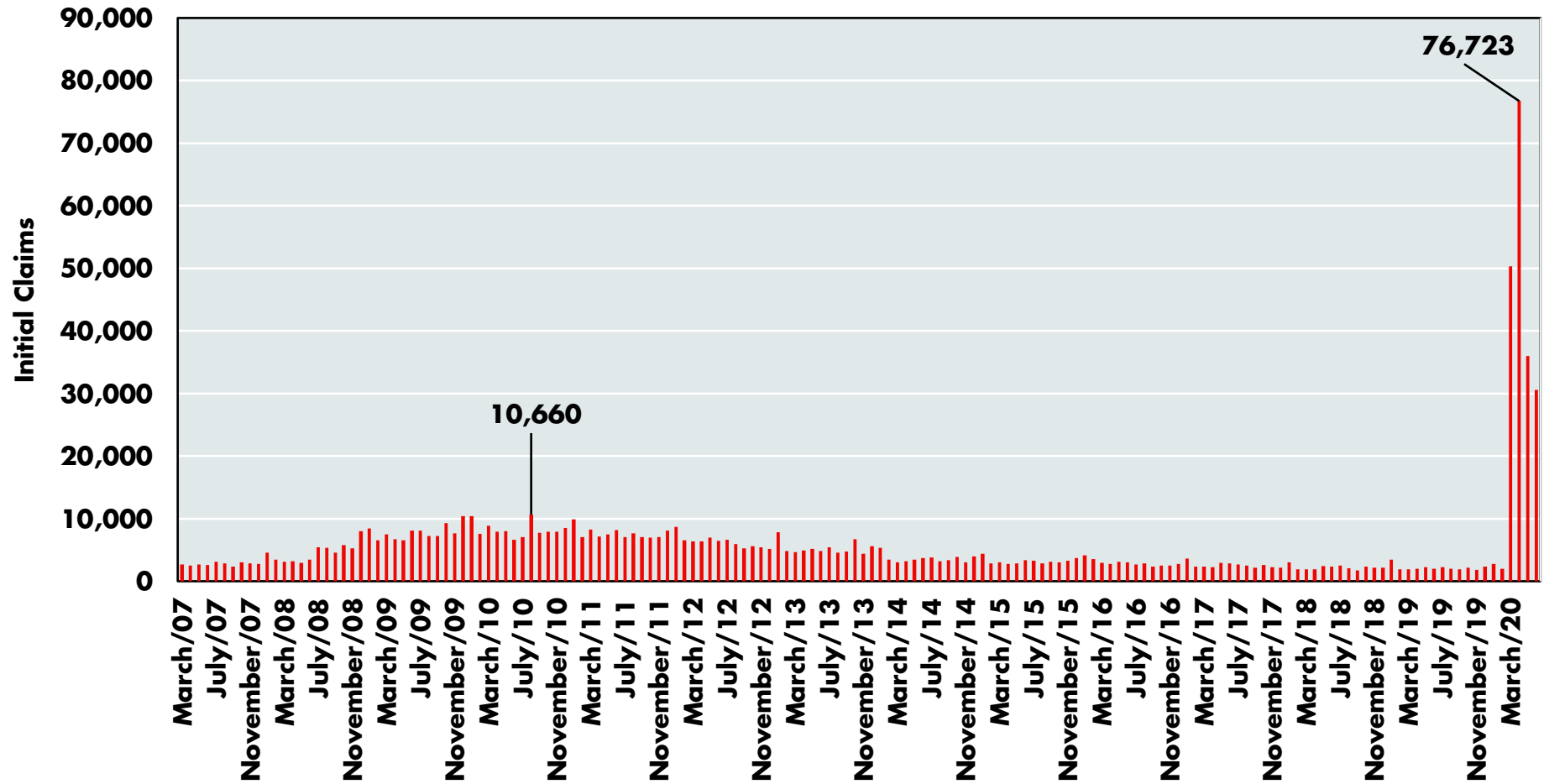
**HEADLINE UNEMPLOYMENT RATE (U3):
HAMPTON ROADS, JUNE 2019-JUNE 2020**



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

GRAPH 5

MONTHLY INITIAL UNEMPLOYMENT CLAIMS:
HAMPTON ROADS, MARCH 2007-JUNE 2020



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

Continuing unemployment claims rose rapidly from 4,315 the week of March 14, 2020, to 88,436 the week of May 16, 2020 (Graph 6). The rapid increases in initial and continuing claims overwhelmed the unemployment insurance system in Virginia, exacerbating the economic crisis. Roughly 1 in 10 workers in Hampton Roads received some form of unemployment benefit at the peak of the crisis. As Hampton Roads moved into Phase 3, the number of workers continuing to receive unemployment benefits had declined significantly. Continuing unemployment claims peaked in mid-May at 88,436 and had declined to 61,289 by mid-August. Even with this progress, continuing claims were almost 14 times higher than pre-COVID levels.

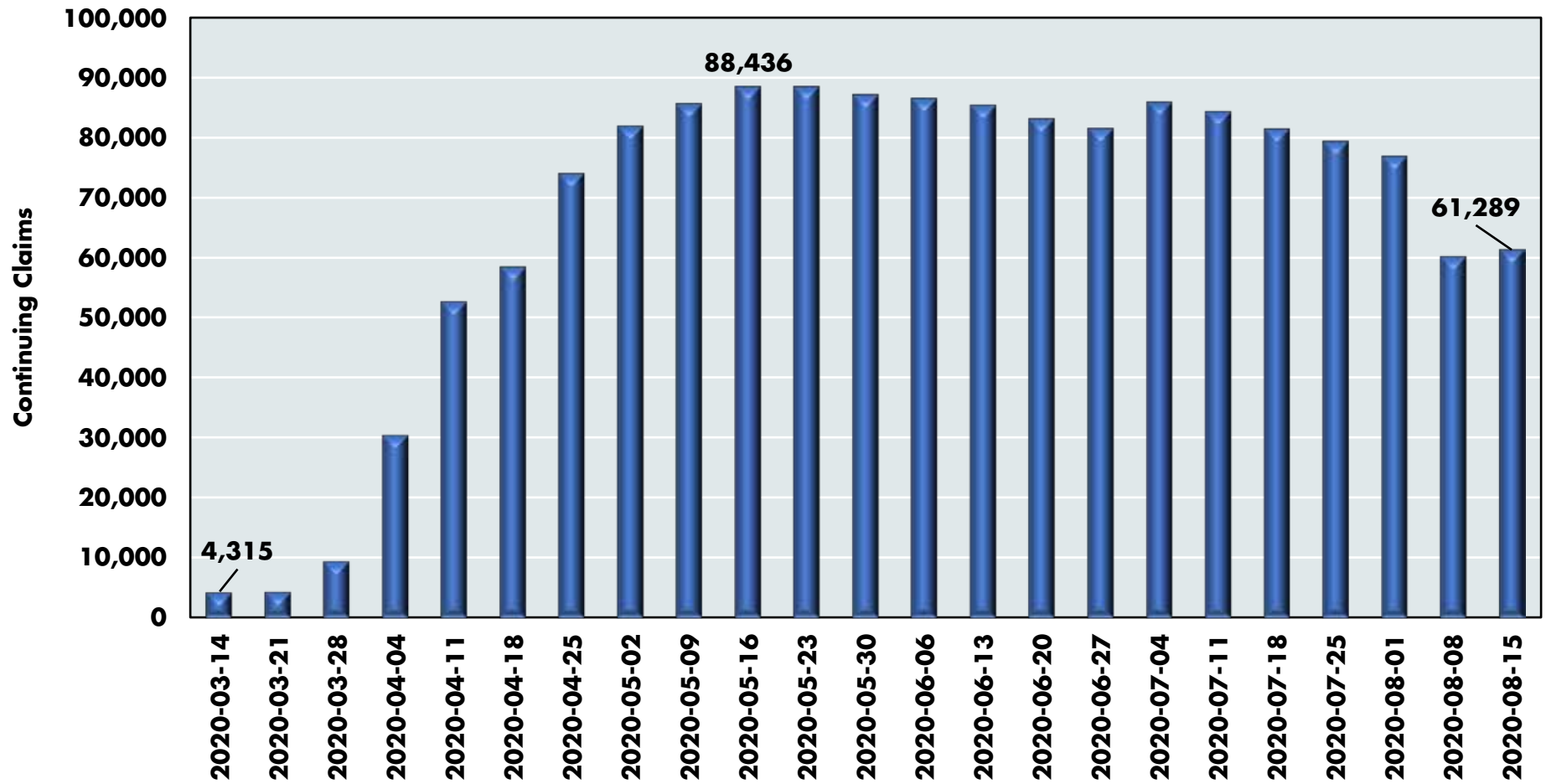
Hampton Roads fared worse than the nation and the Commonwealth during the initial months of the coronavirus recession. Graph 7 compares Hampton Roads, Virginia and the United States from March 14, 2020, to Aug. 15, 2020. The increase in claims was historic. Nationally, initial claims increased by 2,471% from mid-March to the beginning of April. In Virginia, initial claims spiked at 5,446%, while in Hampton Roads, initial claims increased by 6,457%.

While the region's dependence on DOD spending acted as a buffer during previous economic downturns, the other two pillars of the economy, tourism/hospitality and the Port of Virginia, were especially hard hit by the COVID-19 recession. If there is a modicum of good news, it is that Hampton Roads saw initial claims decline significantly in June and July. While initial claims are still higher than pre-COVID levels, the region's performance is on par with that of the Commonwealth. Hampton Roads' efforts to develop a unified recovery strategy recognized these challenges and we applaud the collaborative steps that have been taken to recover as a region, rather than as individual localities. The question now is whether these efforts can be sustained in the face of a prolonged period of recovery.



GRAPH 6

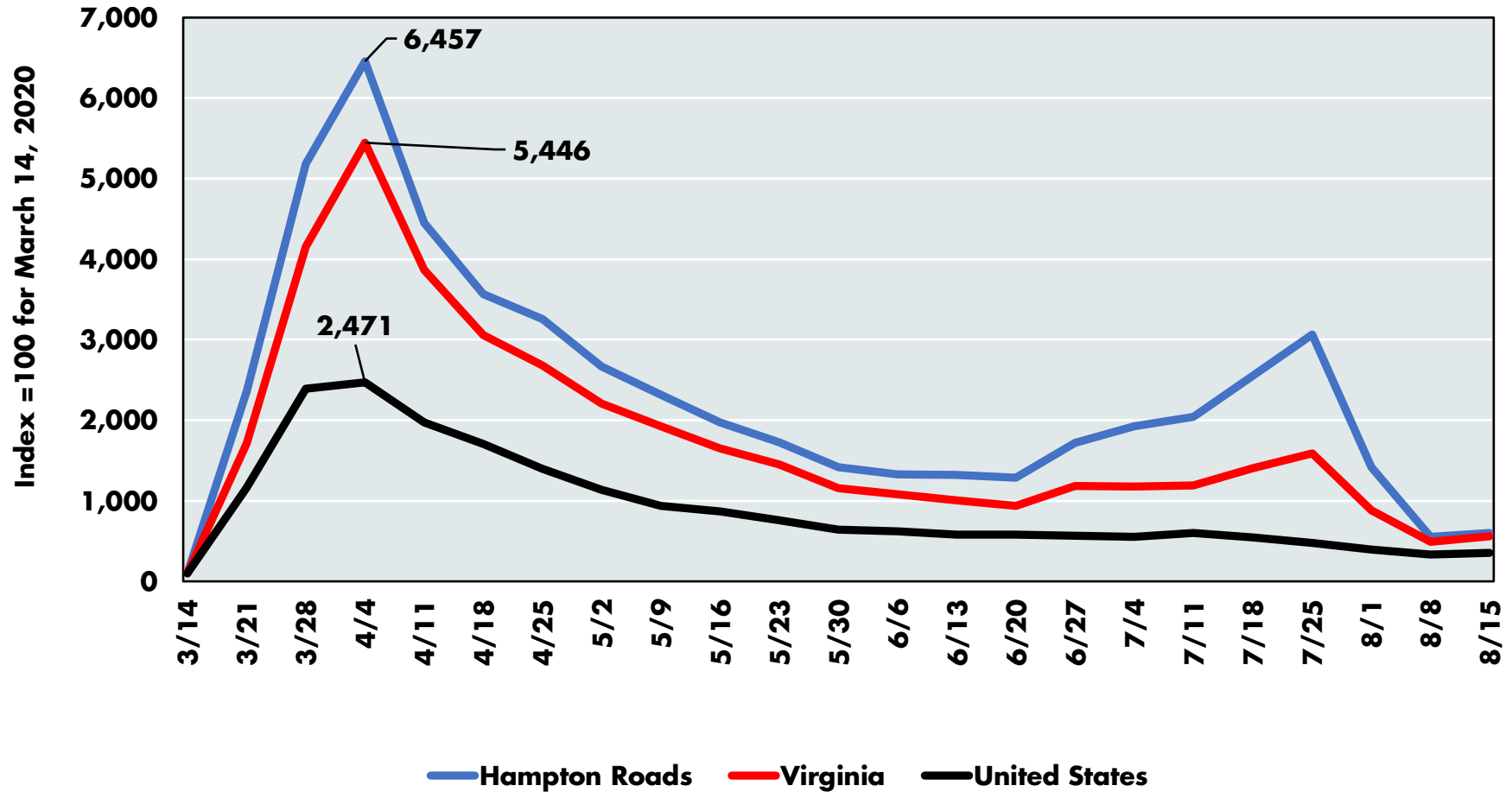
CONTINUING UNEMPLOYMENT CLAIMS:
HAMPTON ROADS, WEEK ENDING MARCH 14, 2020-AUG. 15, 2020



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

GRAPH 7

INITIAL UNEMPLOYMENT CLAIMS:
HAMPTON ROADS, VIRGINIA AND THE UNITED STATES: WEEK ENDING MARCH 14, 2020-AUG. 15, 2020



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

A Decade Of Jobs Lost

Over the last decade, we have described the performance of the Hampton Roads economy as “anemic,” “sluggish” and “uninspiring.” In the 2018 and 2019 editions of the State of the Region Report, we argued that the region had turned the proverbial economic corner. While economic growth was not spectacular, Hampton Roads had put together consecutive years of growth and the number of jobs in the region continued to rise. We projected, at the beginning of 2020, that the region would grow faster than the nation and that the prospects for sustained growth into 2021 appeared promising. Now, the region’s economic prospects are clouded, dependent upon not only COVID-19 cases locally, but also cases throughout Virginia and the nation.

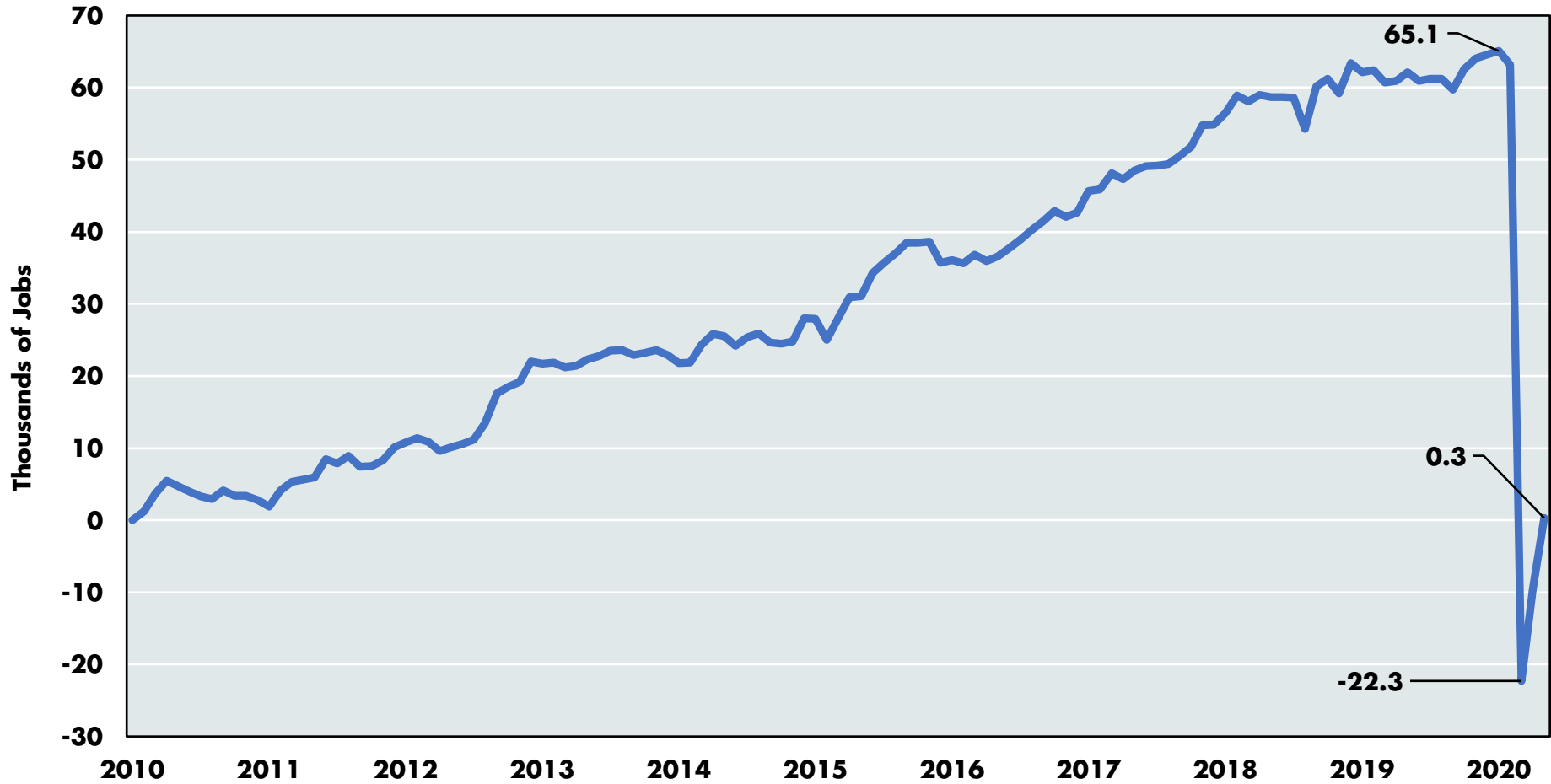
Graph 8 illustrates that, from the trough of the job market in February 2010, employers in Hampton Roads had added 65,100 jobs by February 2020. One month later, a decade of job gains had been wiped out, with Hampton Roads recording 22,300 fewer jobs than during the trough following the Great Recession. In June 2020, the number of regional jobs was roughly equal to the lowest point after the Great Recession.

While the number of jobs has improved from the lows of April, there is a long way to go before we can declare a complete recovery from the ongoing recession. COVID-19 gets a vote. In the absence of an effective therapeutic or vaccine, continuing outbreaks of the virus could slow the nascent recovery. With domestic and international tourism travel curtailed significantly, DOD travel largely halted and other states continuing to battle outbreaks of the virus, it may take longer for positive trends to emerge in the labor market data. It is much more likely that the path forward will see periods of retreat and retrenchment. To expect a smooth and swift recovery is to ignore the evidence.



GRAPH 8

CUMULATIVE GROWTH IN NONFARM PAYROLLS (JOBS):
HAMPTON ROADS, FEBRUARY 2010-JUNE 2020



Sources: Virginia Employment Commission, various dates, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Seasonally adjusted data.

The Hotel Sector: Travel Stops, Revenue Falls And Signs Of A Recovery

The accommodation and food services sector in Hampton Roads bore the initial brunt of the coronavirus economic shock. Domestic and international travel, for all intents and purposes, ground to a halt in March and April. Stay-at-home orders and social distancing measures resulted in the significantly reduced operation or closure of bars and restaurants. While the sector fared better in early summer of 2020, its performance was markedly poorer than in 2019.

Graph 9 illustrates the impact of the pandemic and recession on hotel occupancy in Hampton Roads. In February 2020, occupancy was higher than for the same month in 2019, signaling a potential record year for hotels in the region. With the onset of the pandemic, however, hotel occupancy declined precipitously – to 31% in April 2020. Some localities in Hampton Roads saw occupancy rates below 10% in April. With Virginia moving through Phase 2 and into Phase 3 of reopening, occupancy climbed to 54.9% in June 2020. While this is good news, it must be tempered by the fact that average occupancy was still 22.8 percentage points lower compared to June 2019.

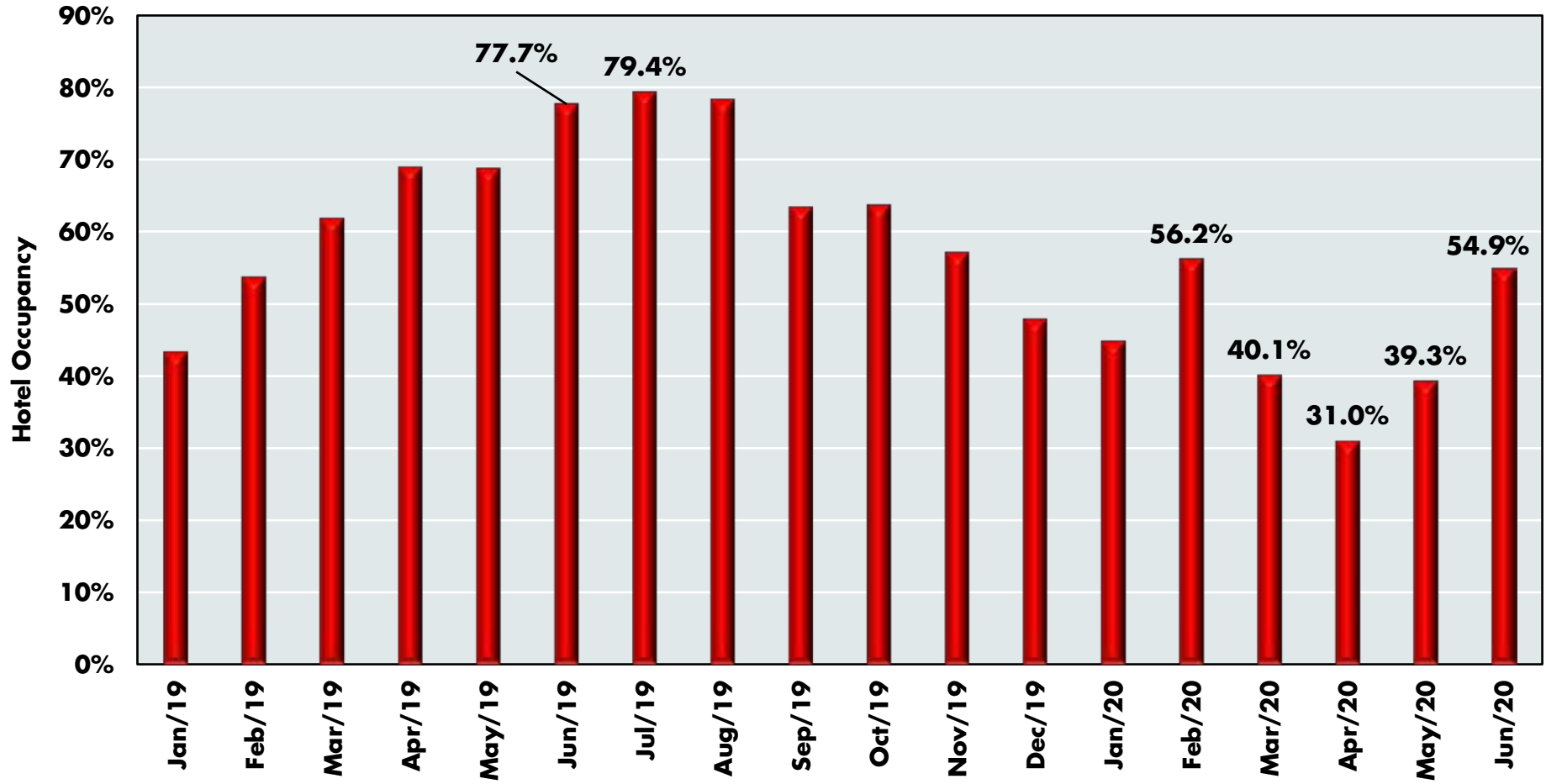
The dramatic declines in hotel occupancy are also evident in hotel revenue. 2019 was a record year for hotels in Hampton Roads. However, 2020 will likely prove historic for declines in revenue (Graph 10). Not only did hotel revenue fall, what each room earned, on average, declined as well. Revenue per available room (RevPAR) fell by 74% on a year-over-year basis in April 2020 and was approximately 45% lower on a year-over-year basis in June 2020. In other words, not only were fewer rooms occupied, but also the rooms that were available for rent in June 2020 earned only 55% of the revenue when compared to June 2019.

While the travel and tourism sector has rebounded from the lows of April 2020, the recovery is not complete. Occupancy, revenue and RevPAR are down significantly on a year-over-year basis. With ongoing outbreaks of COVID-19 in other states, the best hope for the sector is to encourage visitors from within Virginia and traditional markets in the Northeast. Ongoing efforts by Norfolk and Virginia Beach to jointly promote travel to the region are an encouraging step in this direction. We commend this joint advertising campaign and encourage its expansion to leverage the resources of other localities in the region.



GRAPH 9

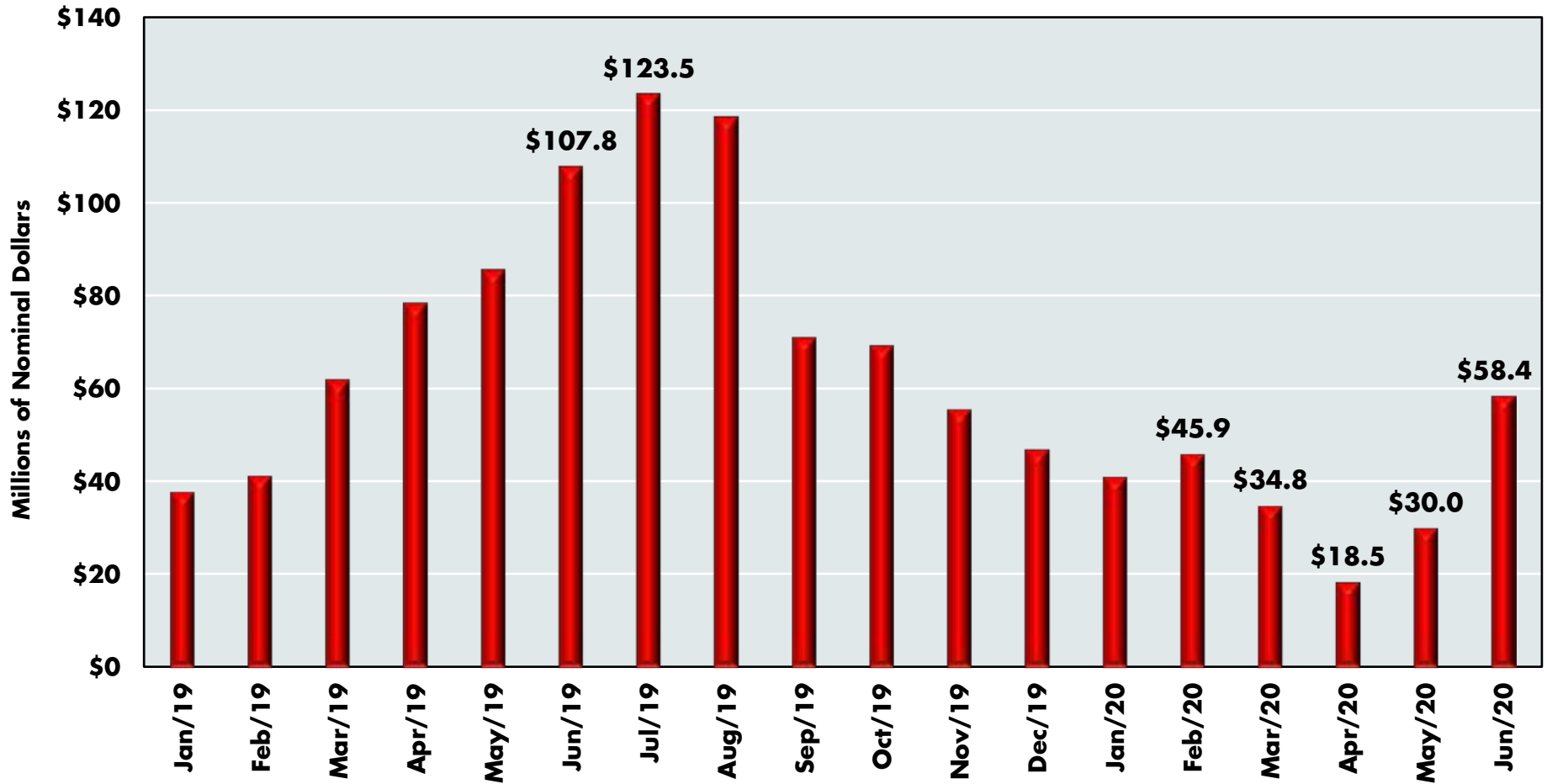
HOTEL OCCUPANCY IN HAMPTON ROADS,
JANUARY 2019-JUNE 2020



Sources: STR Trend Reports and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 10

HOTEL REVENUE IN HAMPTON ROADS,
JANUARY 2019-JUNE 2020



Sources: STR Trend Reports and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

The Port: Rough Seas Ahead

The Port of Virginia's turnaround over the last decade has illustrated its importance to the Hampton Roads economy. Increasing cargo tonnage and a return to profitability were signals of more effective management. Challenges remained, however, including the Port's struggle to increase its market share relative to other East Coast ports. What were perceived by many as ill-advised trade wars of the Trump administration slowed international trade and increased uncertainty. The pandemic not only shocked supply chains, it also significantly reduced the flow of 20-foot equivalent container units (TEUs) through the Port of Virginia (Graph 11).

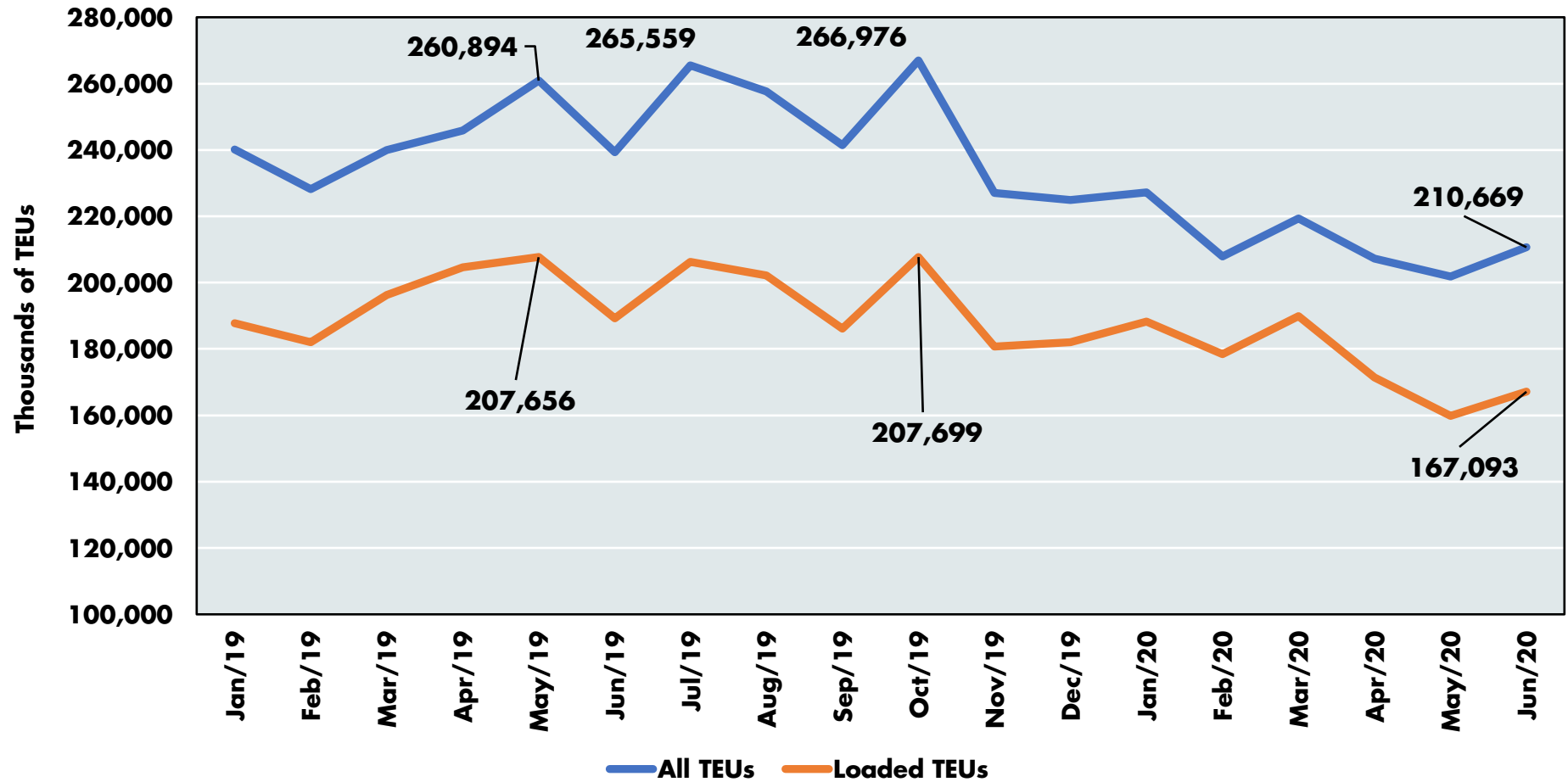
Graph 12 displays the decline in import and export container tonnage for the Port of Virginia from January 2019 to June 2020. On a year-over-year basis, import and export tonnage declined by 17.3% and 4.2%, respectively, from June 2019 to June 2020. The global pandemic adversely impacted trade volumes along the East Coast. Just as troubling was the Port of Virginia's decline in the market share of loaded TEUs from 16.5% in 2019 to 16.2% from January 2020 to May 2020. In other words, the Port was not only handling less cargo, but it also continued to lose market share. Turning around this shift in market share is only one of the challenges the Port of Virginia will face in the coming years.

Two of the three pillars of the Hampton Roads economy (the Port and travel/tourism) face headwinds for the remainder of 2020 and into 2021. The rapid increases in COVID-19 cases in some states in the summer of 2020 reduced the number of households that were willing to travel to Hampton Roads for a vacation. The synchronized domestic and global recession reduced the demand for imports and exports through the Port of Virginia. A return to growth in the region rests on the ability of these sectors to recover, and that is likely to come only with universal masking, more testing, quicker test results, more therapeutics and, finally, effective vaccines.



GRAPH 11

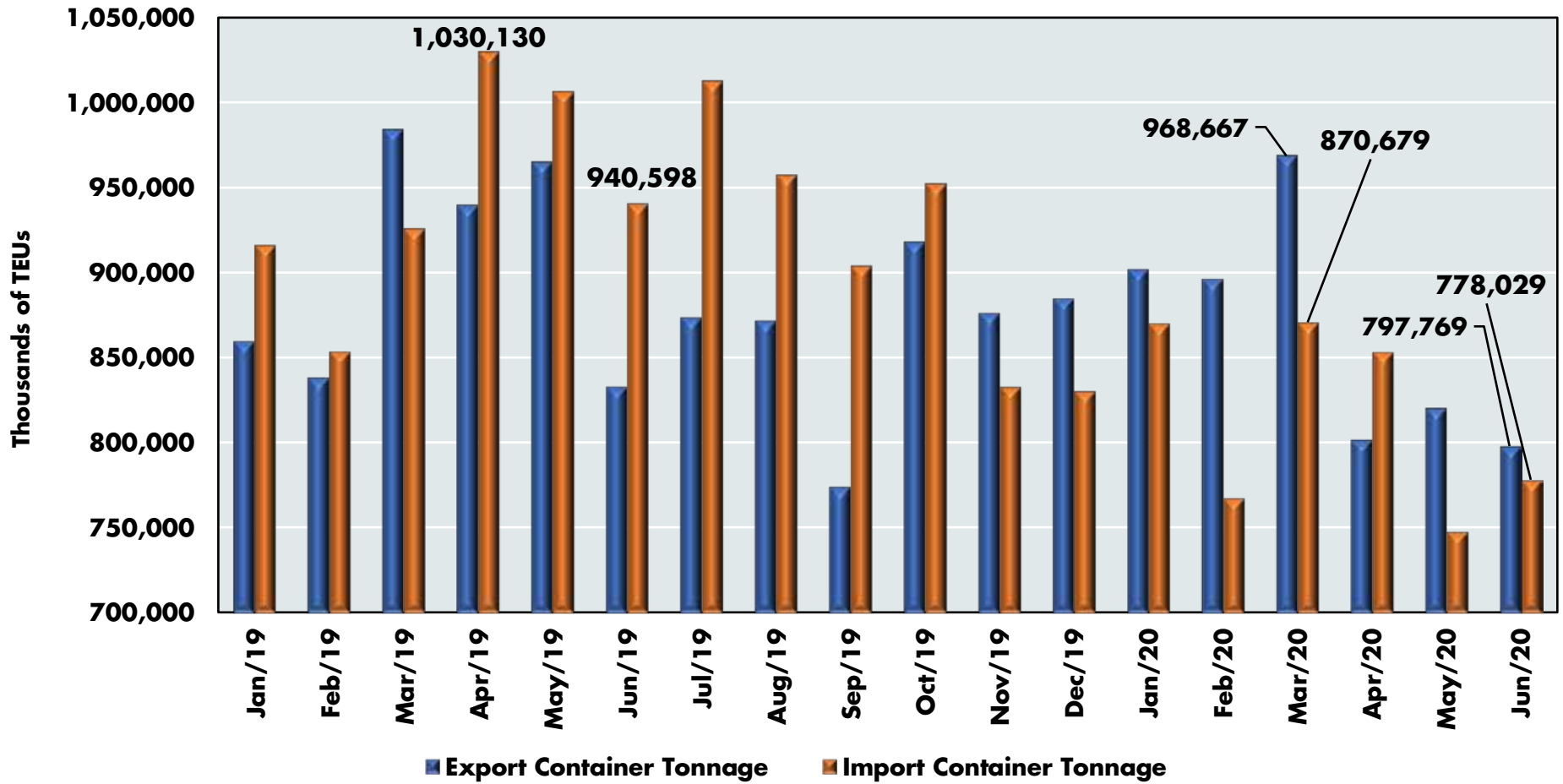
TOTAL AND LOADED 20-FOOT EQUIVALENT CONTAINER UNITS (TEUS):
PORT OF VIRGINIA, JANUARY 2019-JUNE 2020



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

GRAPH 12

IMPORT AND EXPORT CONTAINER TONNAGE:
PORT OF VIRGINIA, JANUARY 2019-JUNE 2020



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

How Are Small Businesses Faring During The Pandemic?

The U.S. Census Bureau launched the Small Business Pulse Survey in May to monitor how businesses are coping with the COVID-19 pandemic and recession. The first wave of the survey covered the months of May and June, while the second wave launched in August 2020. Graph 13 illustrates how respondents to the survey in Hampton Roads gauged the impact of the coronavirus on their operations.

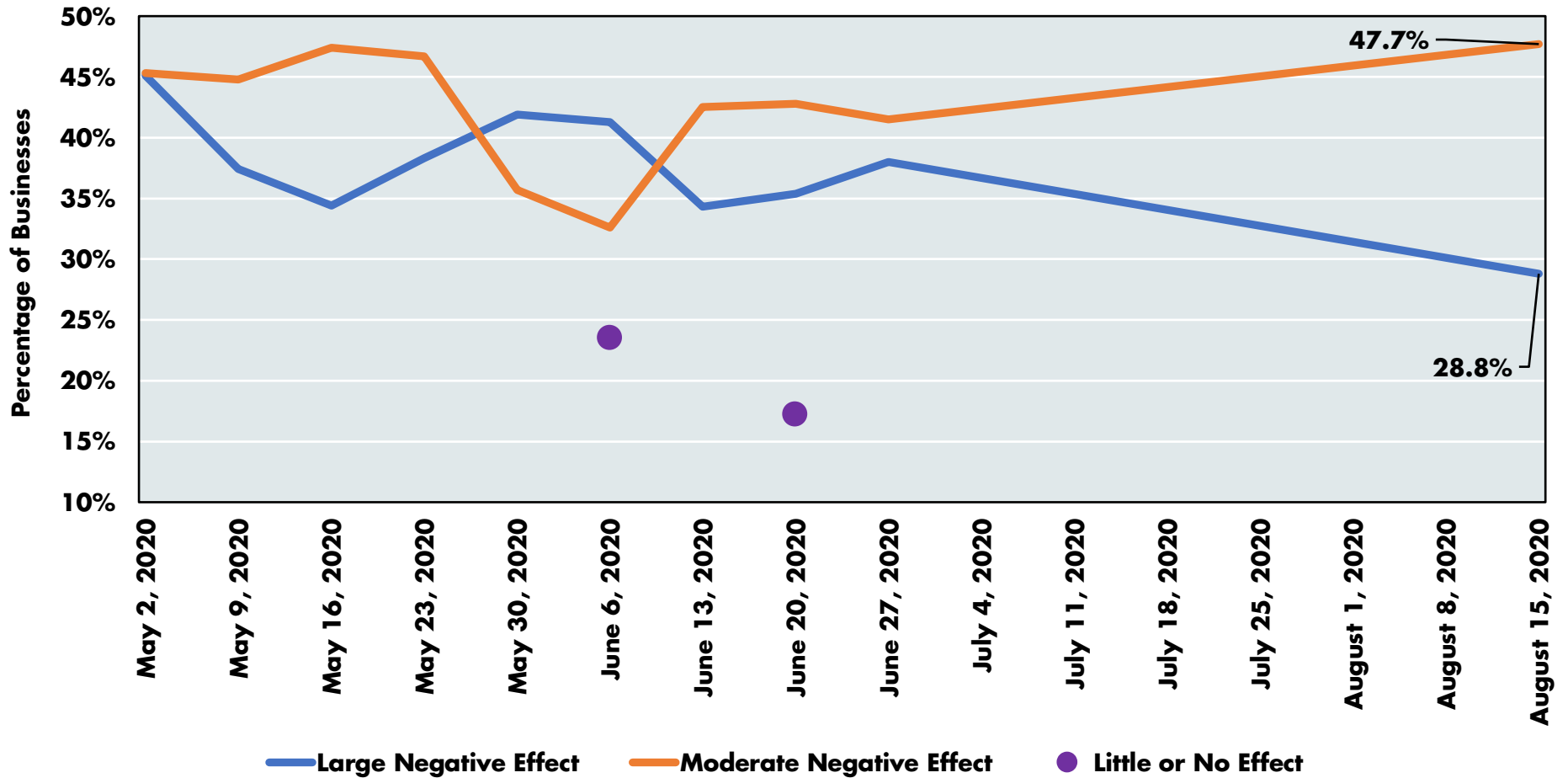
In May and June, more than 80% of small-businesses owners who responded to the survey stated that the pandemic had a large or moderate negative impact on their businesses. Small-business conditions appeared to improve in August, as the percentage of small-business owners stating that the pandemic had a large negative impact declined from approximately 35% to about 29% in August. However, more than 70% of small-business owners still responded that the pandemic had a large or moderate negative impact on their businesses.

In Graph 14, we illustrate the impact of COVID-19 on small businesses in Hampton Roads and Virginia by examining whether respondents had to close all their locations for at least one day during the survey week. The number of small businesses that temporarily closed in the region declined from over 35% in May to approximately 15% at the end of June. Hampton Roads and the Commonwealth appeared to outperform the nation, in that almost 18% of small businesses nationally responded that they had to close at least one day at the end of June. **Even with the Phase 3 reopening in Virginia, however, 1 in 7 small-business owners had to close shop at least one day a week.**



GRAPH 13

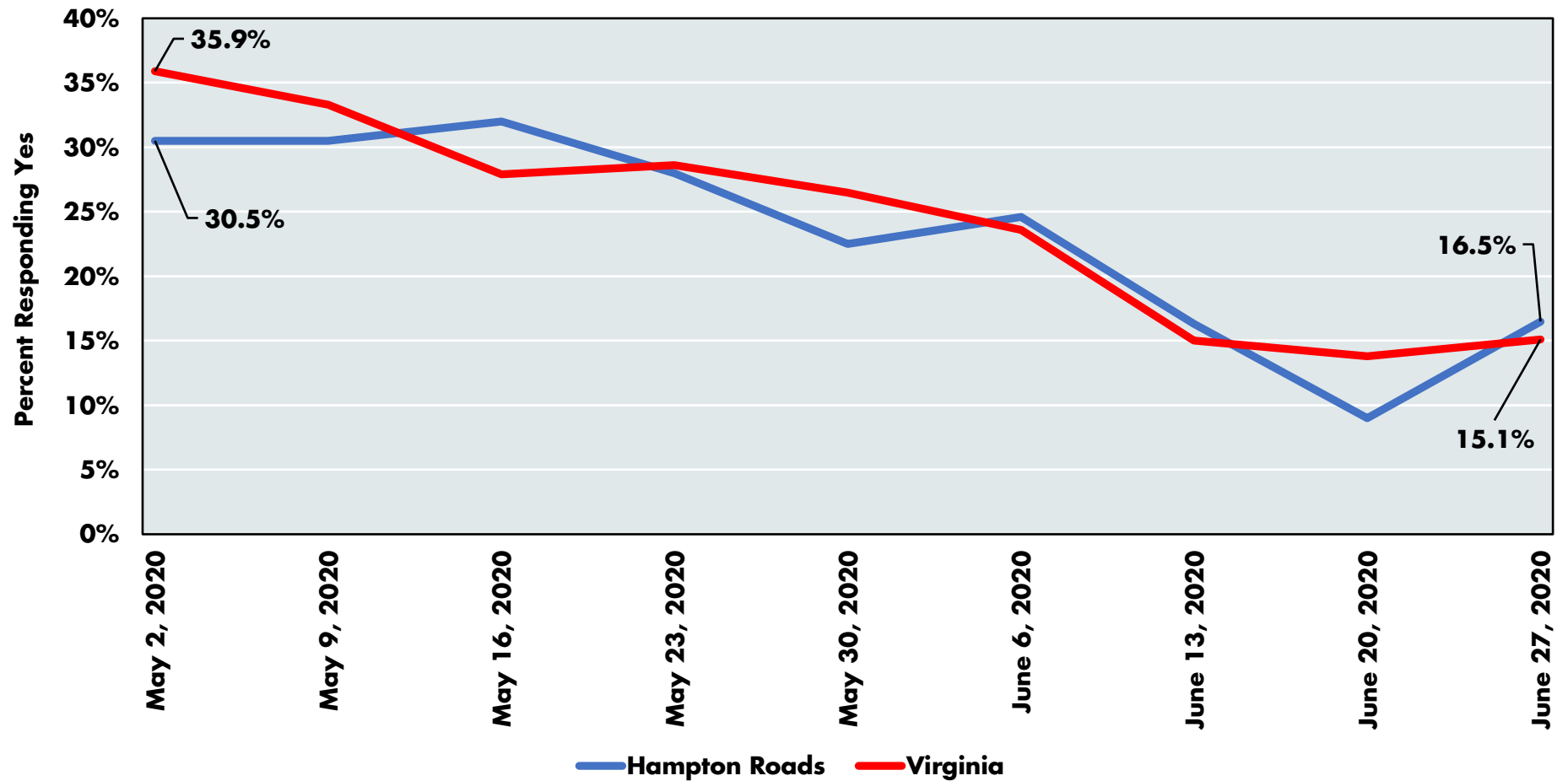
SMALL BUSINESS PULSE SURVEY: OVERALL IMPACT ON BUSINESS OPERATIONS
IN HAMPTON ROADS, MAY 2, 2020-AUG. 15, 2020



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 covered the weeks of May 2 to June 27. Phase 2 of the survey opened the week of Aug. 15. No data were collected from June 27 to Aug. 9.

GRAPH 14

SMALL BUSINESS PULSE SURVEY: OVERALL IMPACT ON BUSINESS OPERATIONS
IN HAMPTON ROADS AND VIRGINIA, MAY 2020-JUNE 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 covered the weeks of May 2 to June 27.

Real Estate: A Bright Spot In The Chaos

Typically, the market for single-family homes struggles during a recession. As unemployment rises and economic activity falls, people become more wary of making large purchases. In some cases, families in financial difficulty are unable to meet their mortgage obligations, and foreclosures increase as a result. Hampton Roads experienced this firsthand in the aftermath of the Great Recession, with rapidly increasing foreclosures, declines in median housing values and a protracted recovery.

Through the summer of 2020, the housing market appeared to be one of the strong aspects of the Hampton Roads economy. Historically low interest rates have enabled homeowners to refinance and others to purchase homes. Graph 15 shows that the value of single-family building permits increased slightly from May 2019 to May 2020.

The market for single-family homes is seasonal, with fewer homes sold in the fall and winter relative to spring and summer. In Hampton Roads, the preponderance of home sales is existing homes, rather than new construction. Graph 16 illustrates the number of sales for existing single-family homes in Hampton Roads. More existing homes were sold in June 2020 than in June 2019. Home sales did slow in March, April and May, compared to last year, but Phase 3 appeared to boost sales back to normal levels. Not only did home sales increase year-over-year in June 2020, median prices continued to increase as well across Hampton Roads (Graph 17).

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.

Historically low interest rates have also contributed to the rise in median home prices in Hampton Roads and across the nation. According to the Real Estate Information Network (REIN), average days on the market declined from 46 days in July 2019 to 41 days in July 2020. Market inventory was only 2.19 months, the lowest since REIN started tracking this measure. These factors led to a 7.9% increase in the median sales from July 2019 to July 2020. Time will tell if this trend continues into the fall of 2020.

Unlike the bigotry or racism exhibited by individuals, institutional or systemic racism refers to policies and practices that, explicitly or implicitly, have the effect of disadvantaging specific racial groups and there is no legitimate economic reason for this practice. Jim Crow laws and racial covenants regarding homeownership explicitly sought to reduce the ability of Black citizens to vote or purchase homes in the suburbs. The practice of labeling Black neighborhoods as high financial risk areas, or redlining, after World War II reduced the ability of Black households to obtain home loans and contributed to the significant disparities in wealth between white and Black households over time. Because systemic racism is largely the result of government policy, it typically requires government action to reduce and eliminate barriers to social and economic mobility.

GRAPH 15

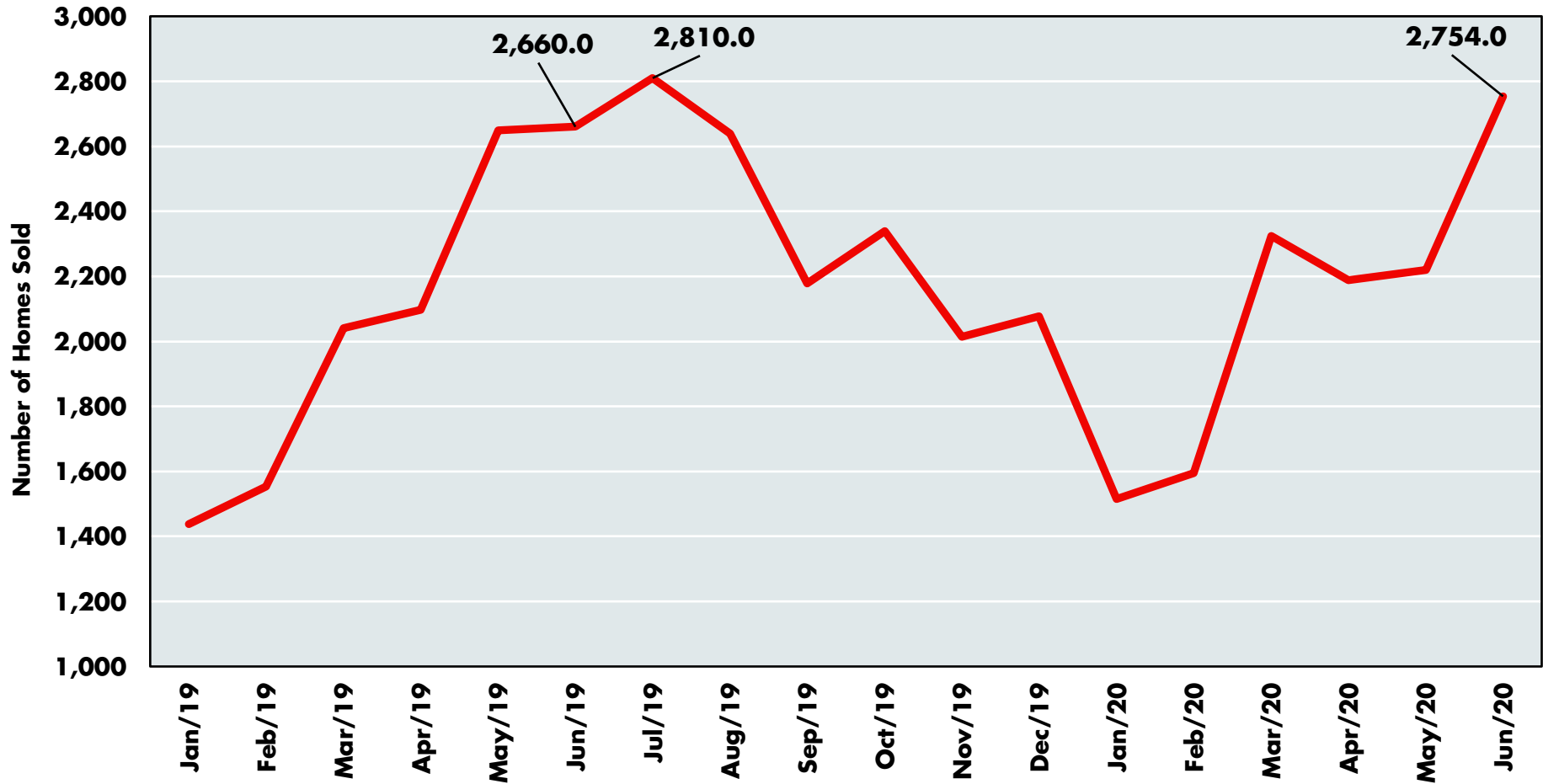
VALUE OF SINGLE-FAMILY BUILDING PERMITS:
HAMPTON ROADS, JANUARY 2019-JUNE 2020



Sources: U.S. Census Bureau and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 16

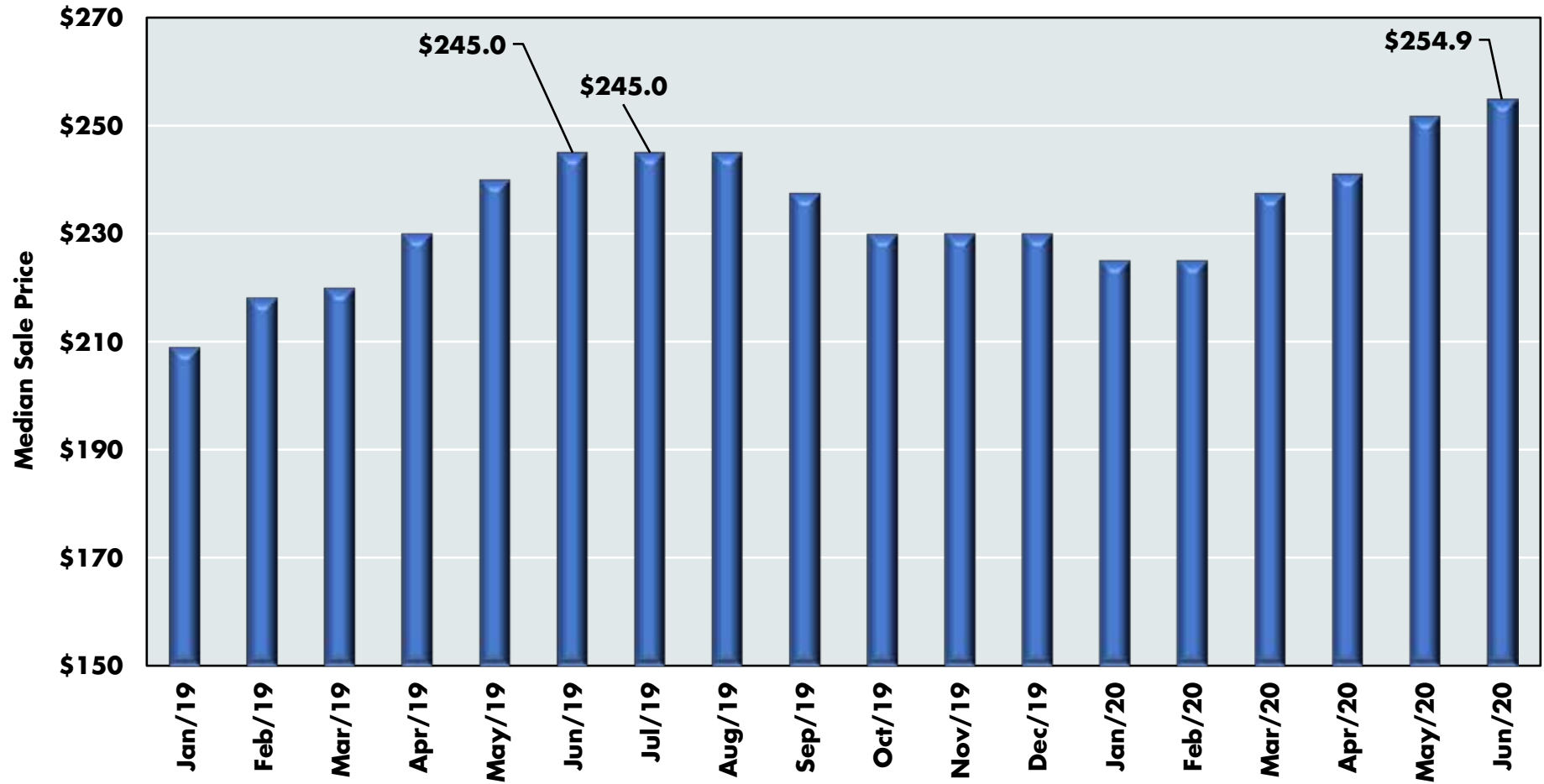
NUMBER OF EXISTING SINGLE-FAMILY HOMES SOLD:
HAMPTON ROADS, JANUARY 2019-JUNE 2020



Sources: Real Estate Information Network and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 17

MEDIAN PRICE OF EXISTING SINGLE-FAMILY HOMES SOLD:
HAMPTON ROADS, JANUARY 2019-JUNE 2020



Sources: Real Estate Information Network and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

The Unequal Toll Of The COVID-19 Pandemic And Recession

The COVID-19 pandemic's disproportionate impact on the Black or African American community in Hampton Roads has shined a light on questions regarding systemic racism, social inequities and economic mobility. According to the U.S. Census Bureau, Black or African American residents comprised approximately 30% of the Hampton Roads population in 2018. Yet, data from the Virginia Department of Health show that Black or African American residents accounted for approximately half of all COVID-19 cases and hospitalizations in Hampton Roads through July 2020.

The disproportionate impact of the recession can be illustrated with labor market data. Graph 18 examines unemployment rates by race for the United States from February 2020 to June 2020. While unemployment rates were near historic lows in February 2020, Black and Hispanic workers were more likely to become and remain unemployed as the COVID-19 pandemic decreased economic activity. With states reopening across the country in May and June, the unemployment rate of white individuals in the labor force declined to almost 10% in June, while Hispanic unemployment dropped from a high of 18.9% in April to 14.5% in June. Black or African American unemployment declined slightly from May to June but lagged that of white and Hispanic workers.

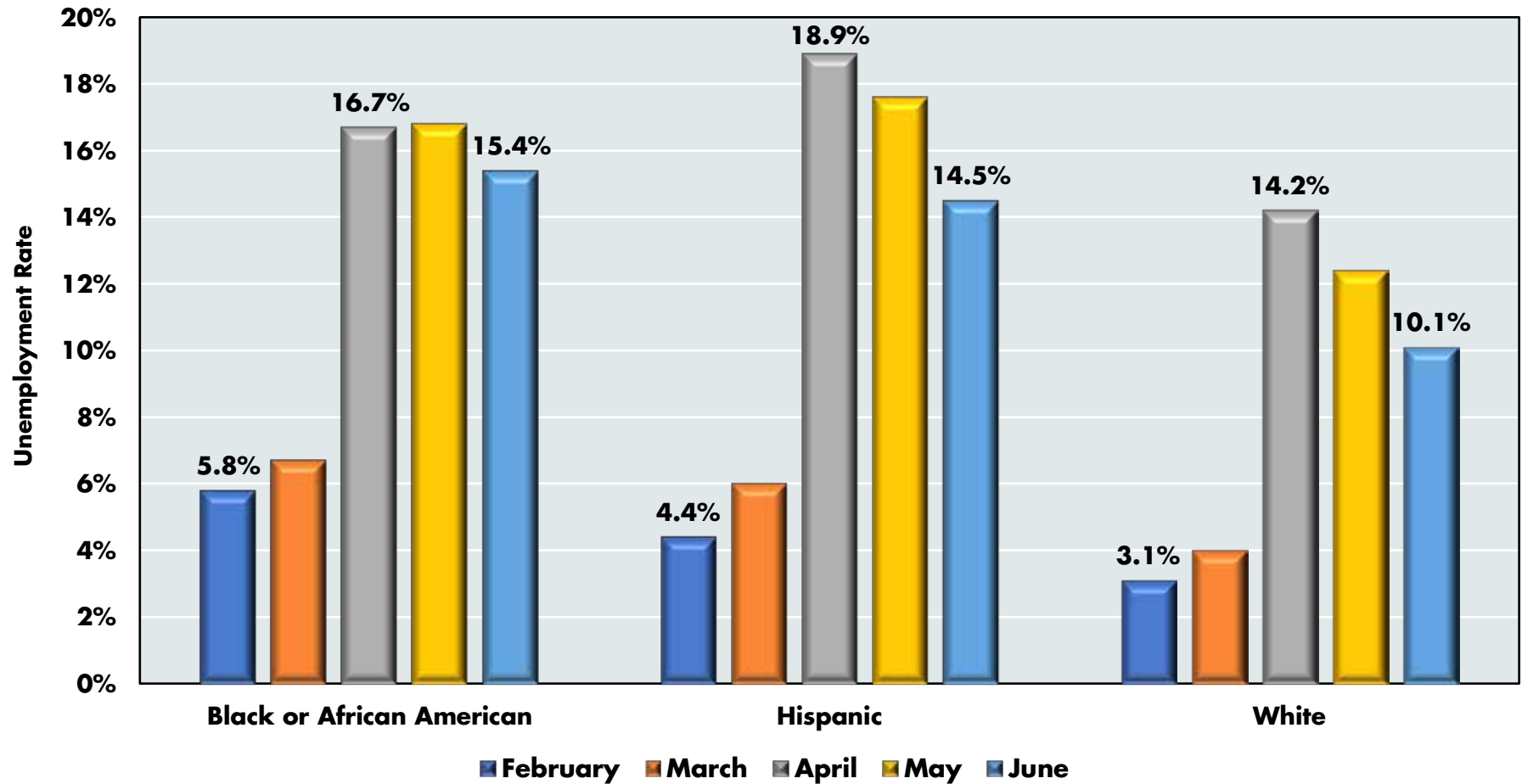
In Graphs 19 and 20, we examine the race of workers who filed an initial unemployment claim in Virginia for the weeks ending June 13, 2020, and July 4, 2020, respectively. According to the U.S. Census Bureau's 2018 American Community Survey 1-year estimates, Black or African American Virginians comprised approximately 19.2% of the population, white Virginians were approximately 67.4% of the population and Asians were about 6.5% of the population.

The initial unemployment claims data for Virginia show that Black or African American residents were more likely than other races to have filed a claim. The percentage of claims filed by Black or African American workers increased from June to July 2020, suggesting that the burden of new layoffs was increasingly falling on Black or African American individuals.



GRAPH 18

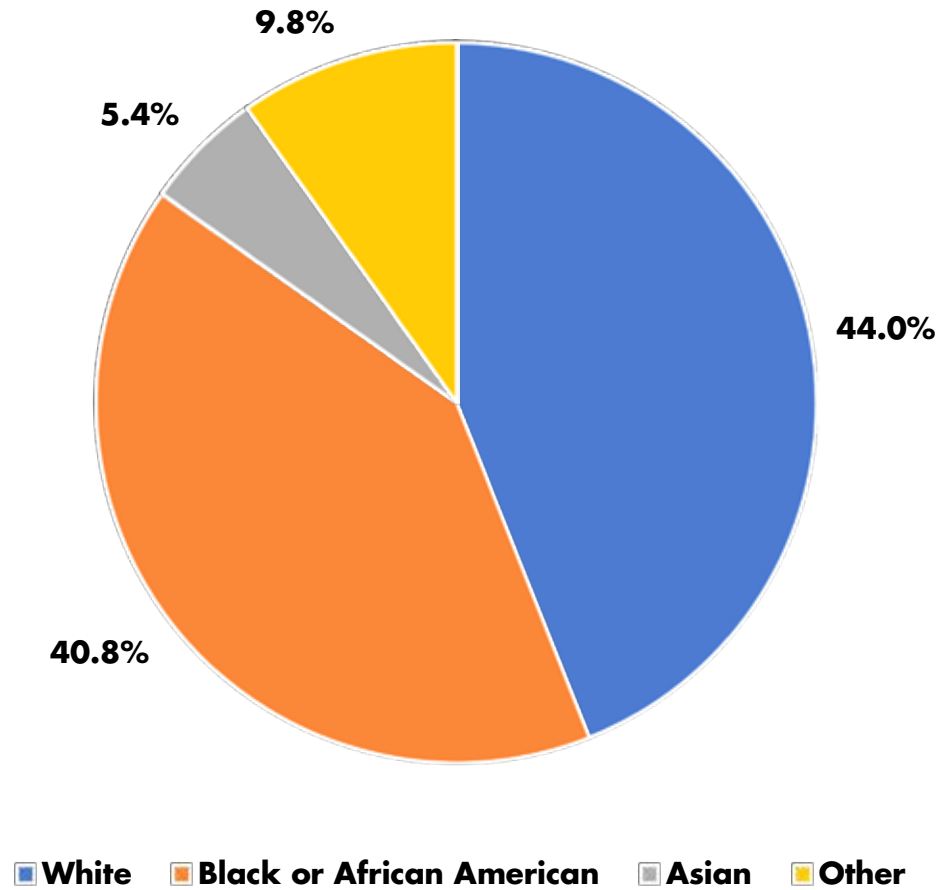
**UNEMPLOYMENT RATE BY RACE:
UNITED STATES, FEBRUARY 2020-JUNE 2020**



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

GRAPH 19

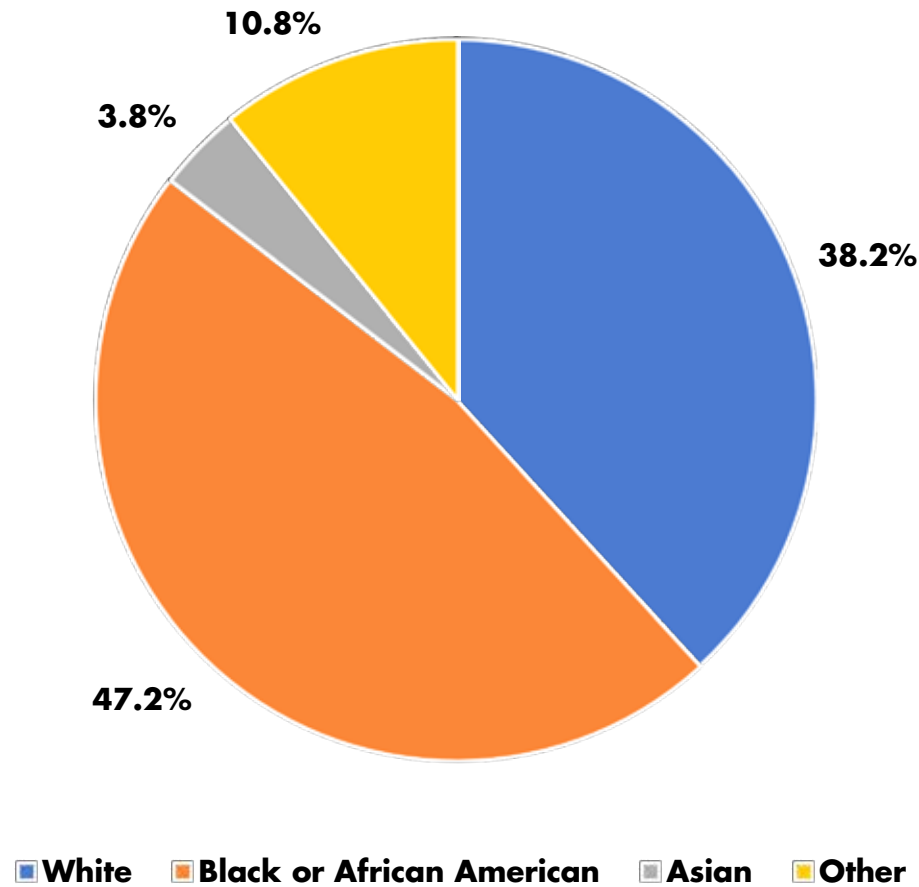
**INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE BY RACE:
VIRGINIA, WEEK ENDING JUNE 13, 2020**



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

GRAPH 20

**INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE BY RACE:
VIRGINIA, WEEK ENDING JULY 4, 2020**



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

Table 1 presents data for continuing claims for unemployment insurance in Hampton Roads in January 2020 and June 2020. According to the 2018 American Community Survey 1-year estimates, Black or African American residents comprised 30.6% of the total population in Hampton Roads. At the end of June 2020, however, 49.7% of all individuals receiving continuing unemployment benefits were Black or African American.

The proportion of women receiving unemployment benefits in Hampton Roads is also higher than their share of the population. This may be due to the declines in employment in several sectors (accommodation and food services, health care and social assistance, and retail trade) that employ relatively more women than men in many roles. The COVID-19 pandemic has also exposed the fragility of child care in Hampton Roads. Child care providers are more constrained in their ability to offer services. If schools do not fully reopen in the fall, this will further compound the employment-child care crisis facing many families. We cannot blithely assume that support structures will operate post-COVID-19 as they did pre-COVID-19.



TABLE 1

**CONTINUING CLAIMS FOR UNEMPLOYMENT INSURANCE BY SELECTED DEMOGRAPHICS:
HAMPTON ROADS, JANUARY 2020 AND JUNE 2020**

Demographic Category	Percent of the Population in 2018	January 2020 Continuing Claims	June 2020 Continuing Claims	Percent of June 2020 Continuing Claims
RACE/ETHNICITY				
White	58.4%	1,921	35,107	39.6%
Black or African American	30.6%	3,466	44,084	49.7%
American Indian or Alaska Native	0.3%	34	346	0.4%
Asian	4.1%	82	3,072	3.5%
Other Races	1.8%	368	5,909	6.7%
Hispanic or Latino	6.9%	46	185	0.2%
AGE				
Under 22 years	28.4%	83	7,834	8.8%
22 to 24 years	4.5%	190	8,692	9.8%
25 to 34 years	15.4%	1,474	26,063	29.4%
35 to 44 years	12.4%	1,465	17,858	20.1%
45 to 54 years	11.9%	1,214	12,490	14.1%
55 to 64 years	12.8%	1,193	10,892	12.3%
65 years and over	14.6%	298	4,874	5.5%
GENDER				
Male	49.1%	2,983	36,455	41.1%
Female	50.9%	2,934	52,248	58.9%

Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Continuing claims for January and June cover 100% of total continuing claims. U.S. Census Bureau (2018), Sex by Age American Community Survey 1-year estimates.

The Psychological Toll Of COVID-19, Recession And Protests

The economic impact of the coronavirus has not been the only source of stress and anxiety in 2020. The death of George Floyd sparked national protests about the role of police, systemic racism and its impact on African Americans, and highlighted continuing inequalities in education, income, wealth and other social conditions. At the beginning of the COVID-19 pandemic, the U.S. Census Bureau launched weekly surveys of households and businesses, intent on capturing the after-effects of the pandemic on Americans.³ The survey results provide a glimpse into the impact of Floyd's death, the protests that followed and the national debate on how to reform policing in America.

The impact of Floyd's death on May 25, 2020, appears in the survey data for the week ending June 2. For the week ending May 26, 36% of Black or African American respondents to the survey reported not being able to control or stop worrying at least several days a week, higher than white or Asian respondents but lower than Hispanic respondents (Graph 21). In the week that followed Floyd's death, 41% of Black or African American households responded that they had several instances of not being able to control these emotions. The increase of five percentage points equates to approximately 1.4 million more Americans exhibiting feelings akin to anxiety or depression.

The survey results reflected in Graph 21 also illustrate that Black or African American and Hispanic households displayed these symptoms at a higher rate than white or Asian households for the duration of the pandemic survey periods.

³ <https://www.census.gov/programs-surveys/household-pulse-survey.html>.

The disproportionate burdens of COVID-19 and layoffs likely contributed to the rise in anxiety and depression among these households. The national debate about the treatment of people of color by the police has heightened tensions for these communities. As the economic and social tolls continue to rise, we should, unfortunately, expect to observe signs of increased fragility among these households.

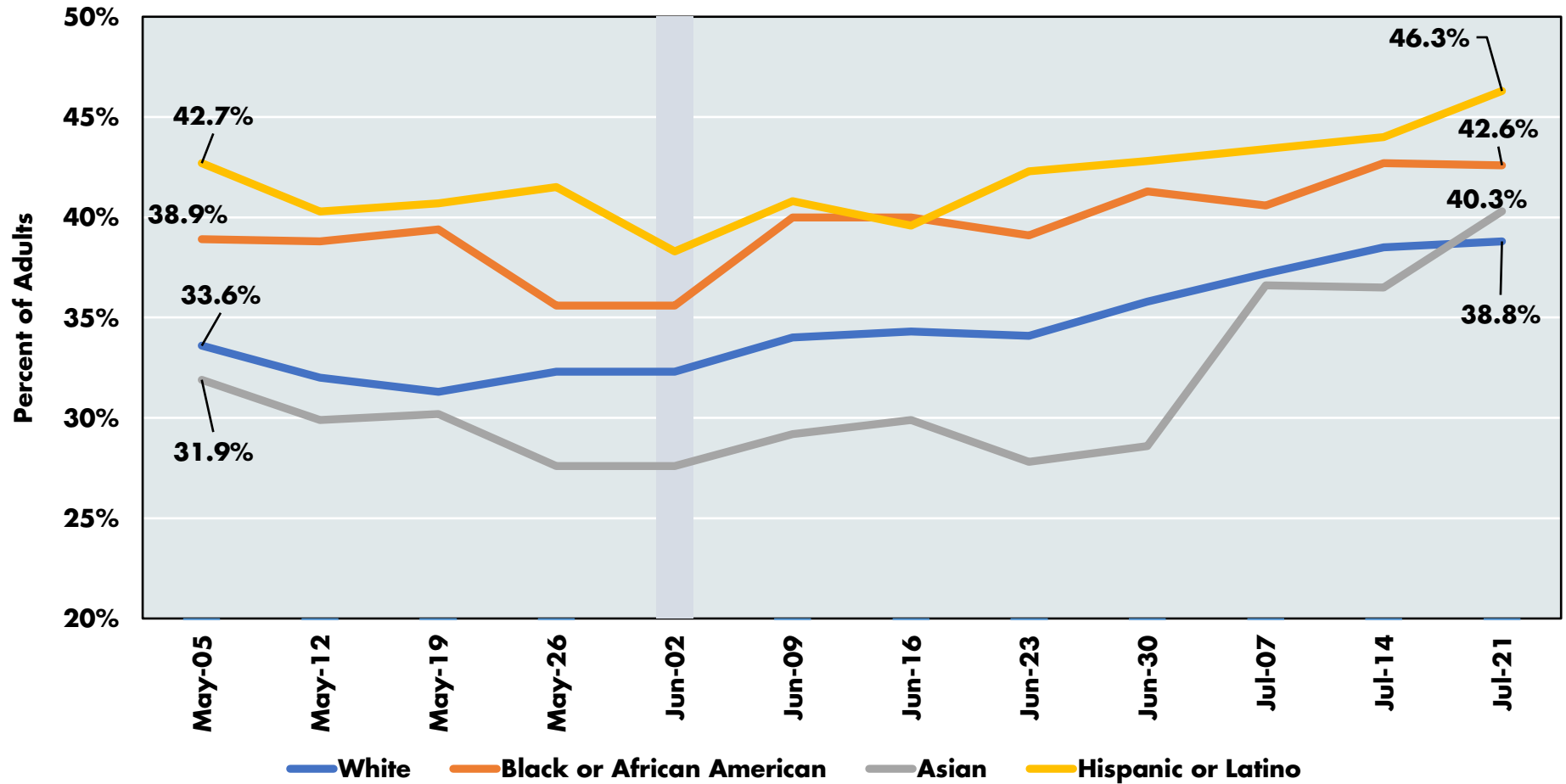
We would be remiss if we did not recognize the rise in symptoms of anxiety and depression among Asian households in the survey. Attempts to label the coronavirus as the "Chinese virus" or "Wuhan virus," limitations on foreign students attending American universities and damage to Asian-American businesses from riots in some cities have appeared to increase anti-Asian sentiment. Recent research notes that anti-Asian sentiment has risen online in proportion to searches for COVID-19.⁴ Other research suggests that hate crimes against Asians have risen in the United States during the pandemic.⁵

The rise of a national debate about the treatment of people of color, inflammatory language about the origins of COVID-19 and economic uncertainty have undermined the mental health of households in the United States. Improvements in economic conditions in June did not reduce these symptoms, highlighting the tensions in American society. As the economic and social tolls continue to rise, we expect, unfortunately, to observe continued signs of anxiety and depression among American households.

⁴ K.F. Vachuska, (2020), "Initial effects of the coronavirus pandemic on racial prejudice in the United States: Evidence from Google trends," <https://doi.org/10.31235/osf.io/bgpk3>.
⁵ A.R. Gover, S.B. Harper and L. Langton, "Anti-Asian Hate Crime During the COVID-19 Pandemic: Exploring the Reproduction of Inequality," *American Journal of Criminal Justice*, 45, 647–667 (2020), <https://doi.org/10.1007/s12103-020-09545-1>.

GRAPH 21

ADULTS EXHIBITING SYMPTOMS OF ANXIETY OR DEPRESSIVE DISORDER:
UNITED STATES, MAY 5, 2020-JULY 21, 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.htm>

Final Thoughts

The COVID-19 pandemic and recession will test the mettle of our region, state and nation like no other crisis in recent memory. We already have observed historic levels of initial unemployment claims, continuing unemployment claims and permanent unemployment. The declines in retail trade, hotel revenue and occupancy, and traffic through the Port of Virginia will likely take years, not months, to abate. The combination of the virus and recession has exposed the continuing racial inequities across all aspects of life. We have a mountain to climb and we must recognize that there will be setbacks. However, in crisis lies opportunity, and we have the chance to improve our economic resiliency and equity. In doing so, we can forge a new path for Hampton Roads, one that not only promises equality of opportunity, but also provides the conditions for every individual to succeed to the best of their abilities.

It took the United States and Virginia more than 70 months to recover all the jobs lost during the Great Recession. For Hampton Roads, the recovery was more tepid, taking over 100 months to recover the lost jobs. Undoubtedly, the COVID-19 economic shock has exceeded that of the Great Recession. The lackluster federal response has only deepened the economic shock. We must temper our expectations and accept that a recovery will not be quick or smooth. In all likelihood, we should not expect a full recovery 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. This is a time to question assumptions and old ways of doing things. How can the region thrive in a world where people wear masks, keep their distance and, in many cases, operate virtually?

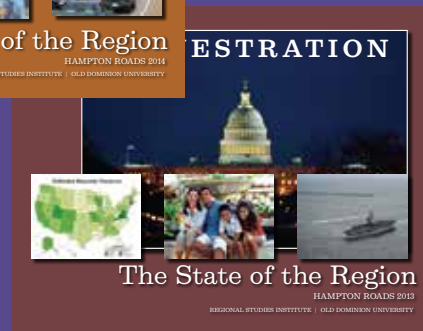
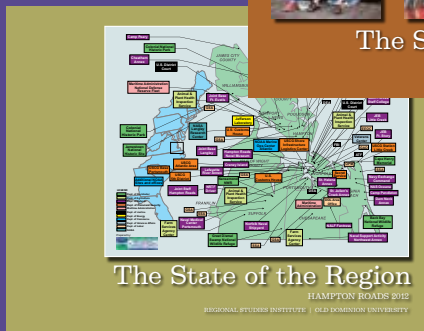
In our efforts to recover, we must ask hard questions about the structure of our regional economy. COVID-19 and the recession have disproportionately affected Hispanic and Black and African American communities across the United States. Hampton Roads has been no exception.

Black and African American workers are more likely to work in industries that have borne the brunt of the crisis. Hotels, restaurants and retail trade shed workers at a historic pace in the spring. While some of these jobs have returned, recovery will take time. Hispanic and Black and African American workers are also more likely to work in jobs that require face-to-face contact and are not conducive to remote work.

The national, state and regional protests have also shone a light on the role of systemic racism in employment, public health and wealth inequality. While conversations about systemic racism are a first step, action is also required for deliberate change to occur. If government policy created these conditions, then deliberate action must be taken to reduce the harms of previous policy decisions. We understand that these discussions will be hard, and solutions will require work and time. However, we have an opportunity to reimagine how we work and live as a region. In 1853, American Unitarian theologian Theodore Parker wrote, "The arc of the moral universe is long, but it bends toward justice." We can, working together, make progress toward that goal.



The Way We Were: 2010-2019



THE WAY WE WERE: 2010-2019

Never erase your past.

It shapes who you are today and will help you to be the person you'll be tomorrow.

– Ziad K. Abdelnour, Wall Street financier, trader and author

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. 2020 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, when looking back over the previous decade, it is important to reflect on what went right and what did not turn out as expected, and to think about how we can improve.

Hampton Roads has much to offer: a natural environment that is intertwined with water, a diverse and unique history and culture, an important role in national security and a relatively high quality of life. The last decade, however, might be characterized as one in which Hampton Roads was largely left behind. The nation and Virginia grew faster than the region. More jobs were created elsewhere. While Virginia was “open for business,” it seemed that Hampton Roads was on the outside, looking in.

Yes, the COVID-19 pandemic will lead to an economic contraction in 2020, but the underlying strengths of the region remain. The question is whether we can leverage these strengths and mitigate our weaknesses to grow over the coming years.

To answer this question, we cannot merely tout the region’s successes, we must ask what has not worked, and, more importantly, why it did not work. Our successes and failures are a product of decisions and the environment in which actions take place. If we are to grow in the current decade, we must first ask what restrained the regional economy in the past decade.

In this chapter, we will discuss challenges that have persisted over time, including those of racism, regionalism and an overt reliance on defense spending. As we note, previous reports have highlighted these issues and we will continue to call attention to them until significant progress is made. There is no cavalry riding to the proverbial rescue; we are responsible for our fate.



A (Mostly) Lost Decade?

By looking back, we can assess what went right and wrong and what defied our expectations. The 2010 State of the Region Report reflected on the impact of the Great Recession and concluded that the region’s long-term growth prospects were imperiled by a reliance on defense spending, a lack of private-sector job creation, net outmigration of residents to other locales in the United States and a transportation infrastructure that imposed increasing costs on residents and businesses. These astute observations are as applicable today as they were in 2010.

The recently concluded decade can be best characterized as largely lost in terms of economic growth. As illustrated in Table 1, the real (inflation-adjusted) size of the Hampton Roads economy declined from \$88.03 billion in 2010 to \$86.85 billion in 2016, a decline of 1.3%. Only in the last three years of the decade did the region return to economic growth, with regional gross domestic product (GDP) increasing at an annual rate of 1.1% in 2017, 2.2% in 2018 and 2.4% in 2019. While not exactly a “happy days are here again” scenario, it was a welcome reprieve from the economic malaise that permeated our discussion in the early years of the decade.

The reasons for our malaise were the same reasons for our increased economic vigor: the pillars of the regional economy – defense spending, the Port of Virginia and the tourism and hospitality industries. Rapid increases in defense spending during the first years of the Trump administration, continued improvements in the tourism and hospitality industries and improvements in both the financial position and cargo traffic at the Port of Virginia combined to lift growth in the last three years of the decade. While the challenges noted in the 2010 State of the Region Report remained, prospects were, one might say, looking up.

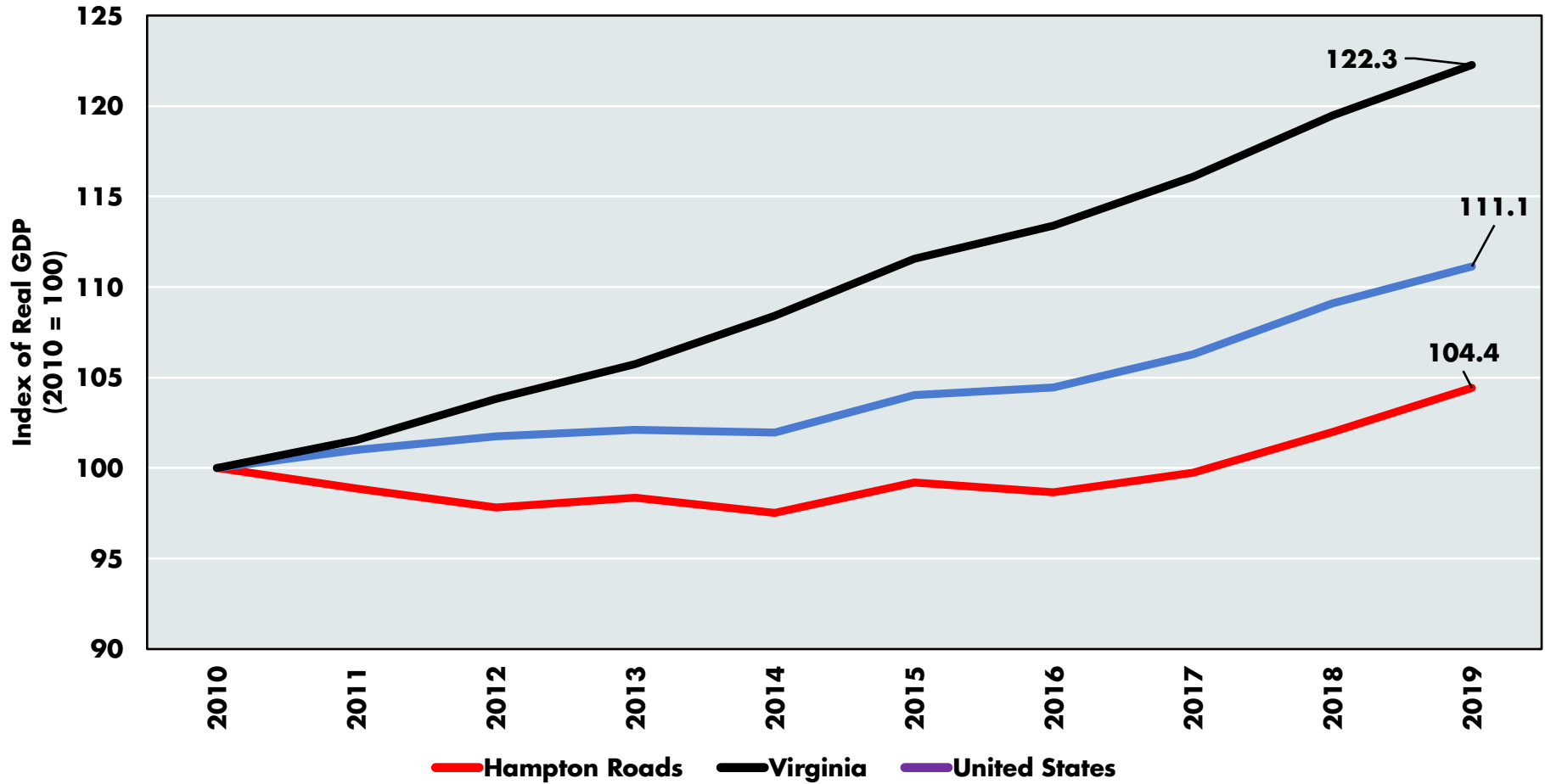
	Nominal GDP	Real GDP (Base Year – 2012)	Year-Over- Year Change in Real GDP
2010	\$85,103	\$88,031	0.1%
2011	\$85,243	\$87,037	-1.1%
2012	\$86,110	\$86,110	-1.1%
2013	\$88,250	\$86,595	0.6%
2014	\$89,436	\$85,851	-0.9%
2015	\$93,392	\$87,340	1.7%
2016	\$94,442	\$86,845	-0.6%
2017	\$96,826	\$87,801	1.1%
2018	\$100,976	\$89,776	2.2%
2019*	\$105,365	\$91,930	2.4%

Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University. *2018 is the advance estimate while 2019 is our estimate.

The region’s economic performance (or lack thereof) over the last decade is more apparent when compared to the United States and Virginia. As illustrated in Graph 1, the Commonwealth and the nation grew faster and more consistently than the region over the decade. By the end of the decade, the U.S. economy was 22.3% larger than it was at the beginning. Virginia’s economy was 11.1% larger, while the regional economy was only 4.4% larger. On average, this meant that for every dollar of new output created in Hampton Roads, Virginia created nearly three dollars, while the nation created five dollars of new output.

GRAPH 1

INDEX OF REAL GROSS DOMESTIC PRODUCT:
UNITED STATES, VIRGINIA AND HAMPTON ROADS, 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. Data for 2018 for Hampton Roads are the advance estimates and the 2019 data represent our estimate. Index is equal to 100 in 2010.

In Table 2, we present the annual average growth in real GDP for the U.S., Virginia and selected metropolitan areas over the last two decades. Between 2001 and 2009, the Hampton Roads economy grew at an average annual rate of 2%, outpacing the nation and several peer metropolitan areas. While the region did not grow as fast, on average, as the Commonwealth, growth was respectable.

The last decade, however, saw the region lag the nation, the Commonwealth and every peer metropolitan area. From 2010 to 2018, Hampton Roads grew at an annual average rate of 0.2%, much slower than the next lowest member in the peer group, Memphis, which managed to grow 1.1% annually over the same period. We can only look wistfully at the economic performance of Nashville and Raleigh, where annual growth rates averaged above 4% from 2010 to 2018.

The slowing rate of economic growth in the region manifested itself in numerous ways. A lack of vibrancy made it more difficult to attract and retain businesses. Even though Hampton Roads produces thousands of college graduates annually, it became increasingly difficult to persuade graduates to stay. Outmigration increased, especially among workers in their 30s and 40s. The lack of private-sector job growth continued to inhibit attempts to diversify the economy, increasing the region's vulnerability to budgetary decisions made in Washington, D.C. These challenges have not left us, but have subsided in the face of the COVID-19 pandemic and recession.

TABLE 2 AVERAGE ANNUAL GROWTH IN REAL GROSS DOMESTIC PRODUCT: UNITED STATES, VIRGINIA AND SELECTED METROPOLITAN STATISTICAL AREAS, 2001-2018		
Metropolitan Statistical Area	Average Growth 2001-2009	Average Growth 2010-2018
United States	1.7%	2.3%
Virginia	2.2%	1.1%
Charlotte-Concord- Gastonia, NC-SC	3.0%	3.2%
Cincinnati, OH-KY-IN	0.5%	1.7%
Cleveland-Elyria, OH	0.1%	1.4%
Fresno, CA	3.1%	2.4%
Jacksonville, FL	1.5%	2.6%
Memphis, TN-MS-AR	-0.1%	1.1%
Nashville-Davidson- Murfreesboro-Franklin, TN	2.9%	4.0%
Raleigh, NC	2.8%	4.1%
Richmond, VA	0.4%	1.5%
San Diego-Carlsbad, CA	2.3%	2.9%
Virginia Beach-Norfolk- Newport News	2.0%	0.2%

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

Economic Performance At The City And County Level

Measuring economic performance at the local level typically is a difficult undertaking because of the many factors specific to the time period and region in question. The inflows and outflows of military personnel and ships that distinguish Hampton Roads are but one example. Nevertheless, in 2018 the Bureau of Economic Analysis (BEA) released prototype estimates of GDP for counties in the United States for 2012 through 2015. In 2019, the BEA expanded and revised these estimates, with county and county-equivalent GDP estimates ranging from 2001 to 2018. These estimates provide comparable measures of economic activity across counties in the United States. While by no means perfect, these estimates offer insight into economic activity at the local level in Hampton Roads.¹

Table 3 illustrates how the decade of slow growth played out among the cities and counties in the region. For some cities and counties, GDP in 2018 was lower in real terms than in 2010. In other words, estimated economic activity had not recovered to levels observed at the start of the decade. It is likely that the continued growth in 2019 lifted some of the localities into positive territory, but we must also recognize that some of the declines are so stark that these localities may still be in a state of economic decline. The highest annual average growth rate was observed in North Carolina's Currituck County (2.3%), but since Currituck accounts for only 0.7% of the regional economy, this did not move overall economic performance that much.

Hampton Roads' seven largest cities accounted for 88.2% of GDP in 2018, and this approaches 93% if one adds James City County and Williamsburg to the mix. Norfolk and Virginia Beach alone generated nearly half of all economic activity in the region in 2018, but the estimates suggest a tale of two different economies: Virginia Beach growing slowly and Norfolk contracting slowly. If we focus on the last two years of data, a more hopeful picture emerges. More than half of the cities and counties in the region experienced positive year-over-year growth in real economic activity in 2017 and 2018.

¹ We must caveat our discussion with two points. First, these estimates (as with the metro-level estimates) are revised annually. Second, the county-level and metro estimates are not directly comparable; that is, the county estimates do not sum to the metro estimates.

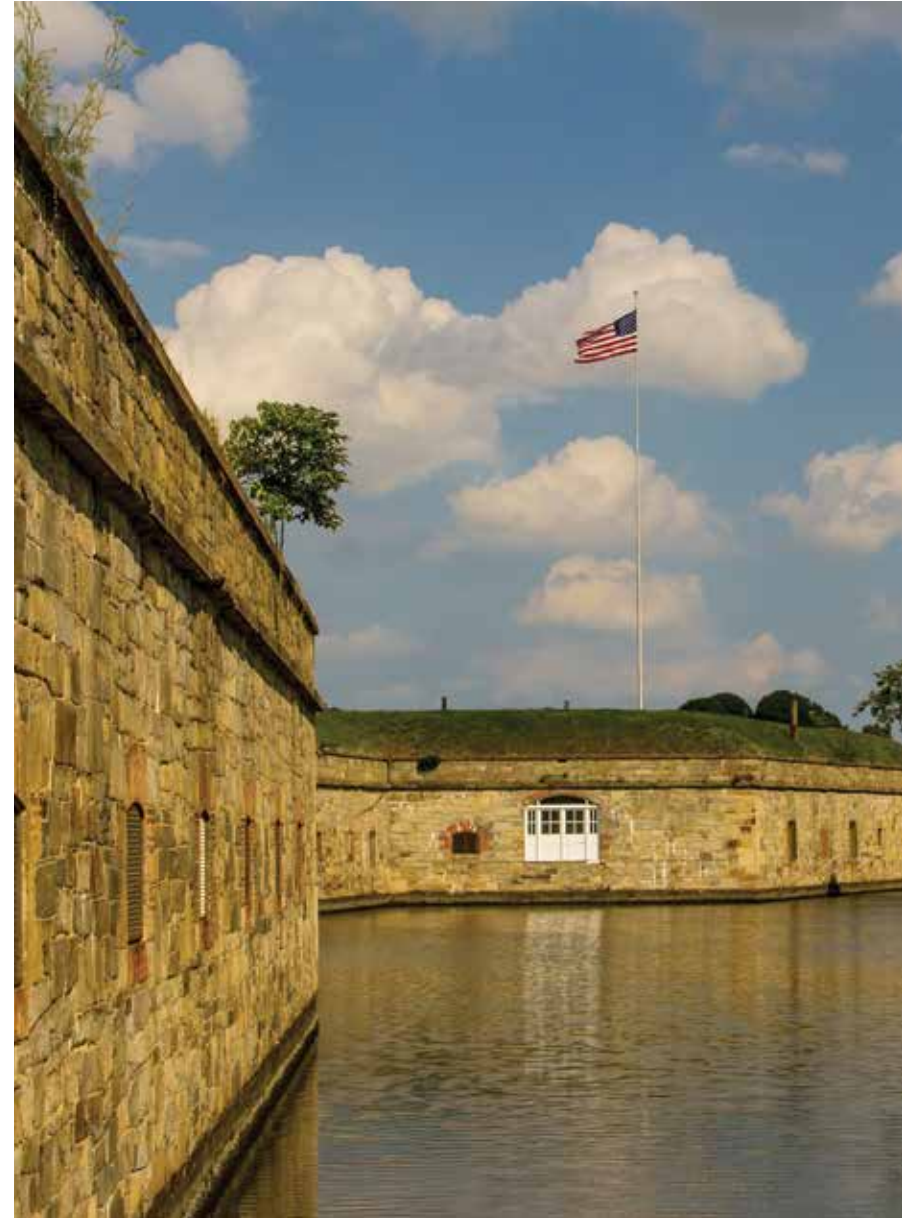


TABLE 3

**REAL GROSS DOMESTIC PRODUCT: CITIES AND COUNTIES OF HAMPTON ROADS, 2010-2018
(IN THOUSANDS OF 2012 DOLLARS)**

Location	2010 Real GDP	2018 Real GDP	Annual Growth in Real GDP 2010-2018	Percent of Hampton Roads 2018 Real GDP
Camden County, NC	\$224,529	\$150,096	-4.9%	0.2%
Chesapeake	\$9,266,588	\$9,671,615	0.5%	10.8%
Currituck County, NC	\$525,247	\$632,304	2.3%	0.7%
Gates County, NC	\$160,776	\$148,159	-1.0%	0.2%
Gloucester County	\$821,678	\$839,170	0.3%	0.9%
Hampton	\$6,908,712	\$6,525,663	-0.7%	7.3%
Isle of Wight County	\$1,698,348	\$1,608,390	-0.7%	1.8%
James City County and Williamsburg	\$4,152,334	\$4,089,508	-0.2%	4.6%
Mathews County	\$193,012	\$181,338	-0.8%	0.2%
Newport News	\$11,213,678	\$12,053,270	0.9%	13.4%
Norfolk	\$21,688,665	\$20,628,226	-0.6%	23.0%
Portsmouth	\$5,290,236	\$5,719,664	1.0%	6.4%
Southampton County and Franklin	\$718,082	\$703,487	-0.3%	0.8%
Suffolk	\$4,023,458	\$4,409,998	1.2%	4.9%
Virginia Beach	\$18,788,299	\$20,081,231	0.8%	22.4%
York County and Poquoson	\$2,356,377	\$2,332,335	-0.1%	2.6%
Hampton Roads	\$88,030,767	\$89,775,562	0.2%	--

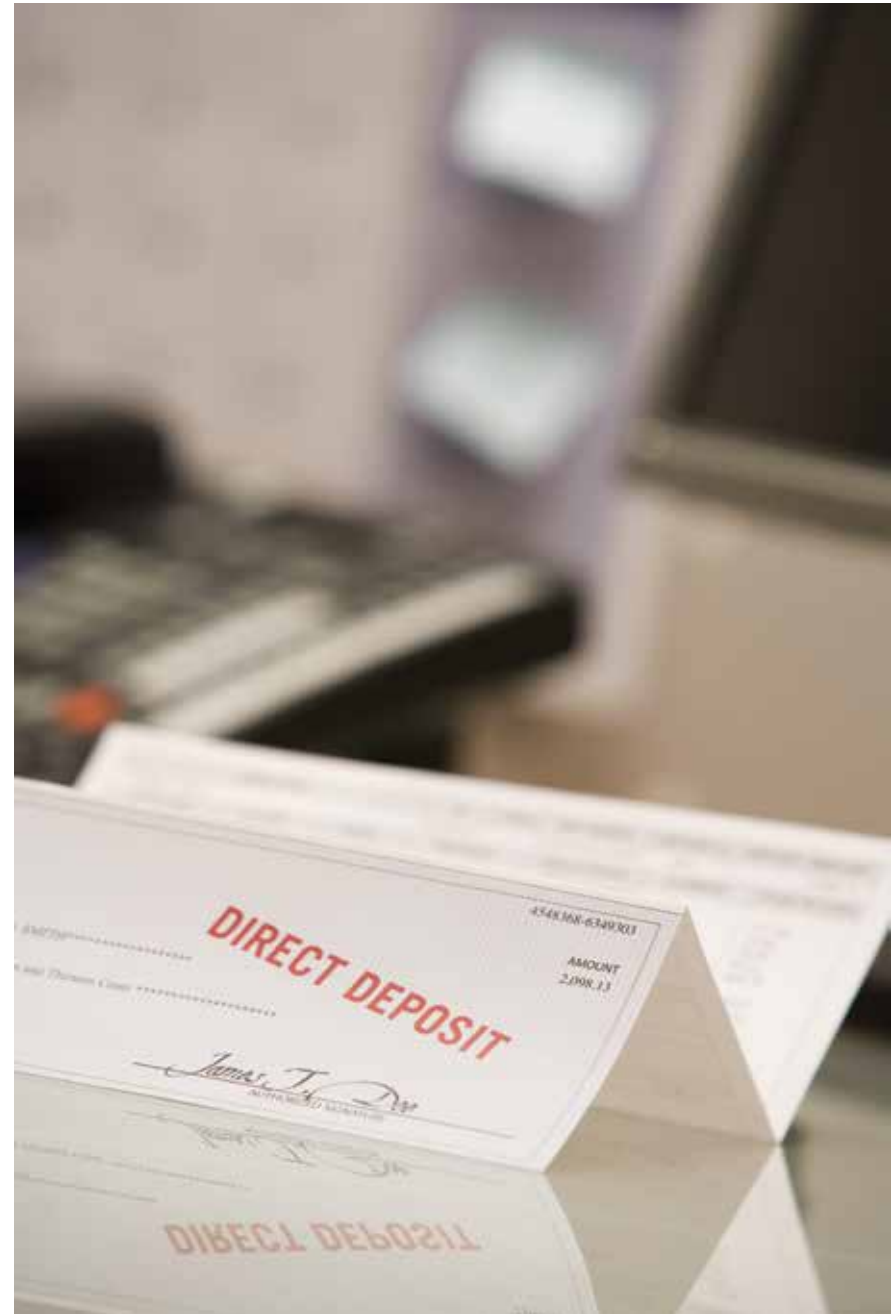
Sources: Bureau of Economic Analysis, Prototype Estimates of County Level GDP, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Real GDP in 2012 chained dollars. Percentages may not sum to 100% due to rounding. When necessary, the BEA combines localities to produce GDP estimates. Estimated annual growth is the compound annual growth rate. September 2018 definition of the Virginia Beach-Norfolk-Newport News MSA.

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 income per capita is a signal of a thriving economy, where incomes are rising faster than increases in the population. On the other hand, stagnant or declining average income may point to economic difficulties. The challenge for a region is to foster economic conditions that attract new residents and businesses, spurring economic activity and increasing average incomes over time.

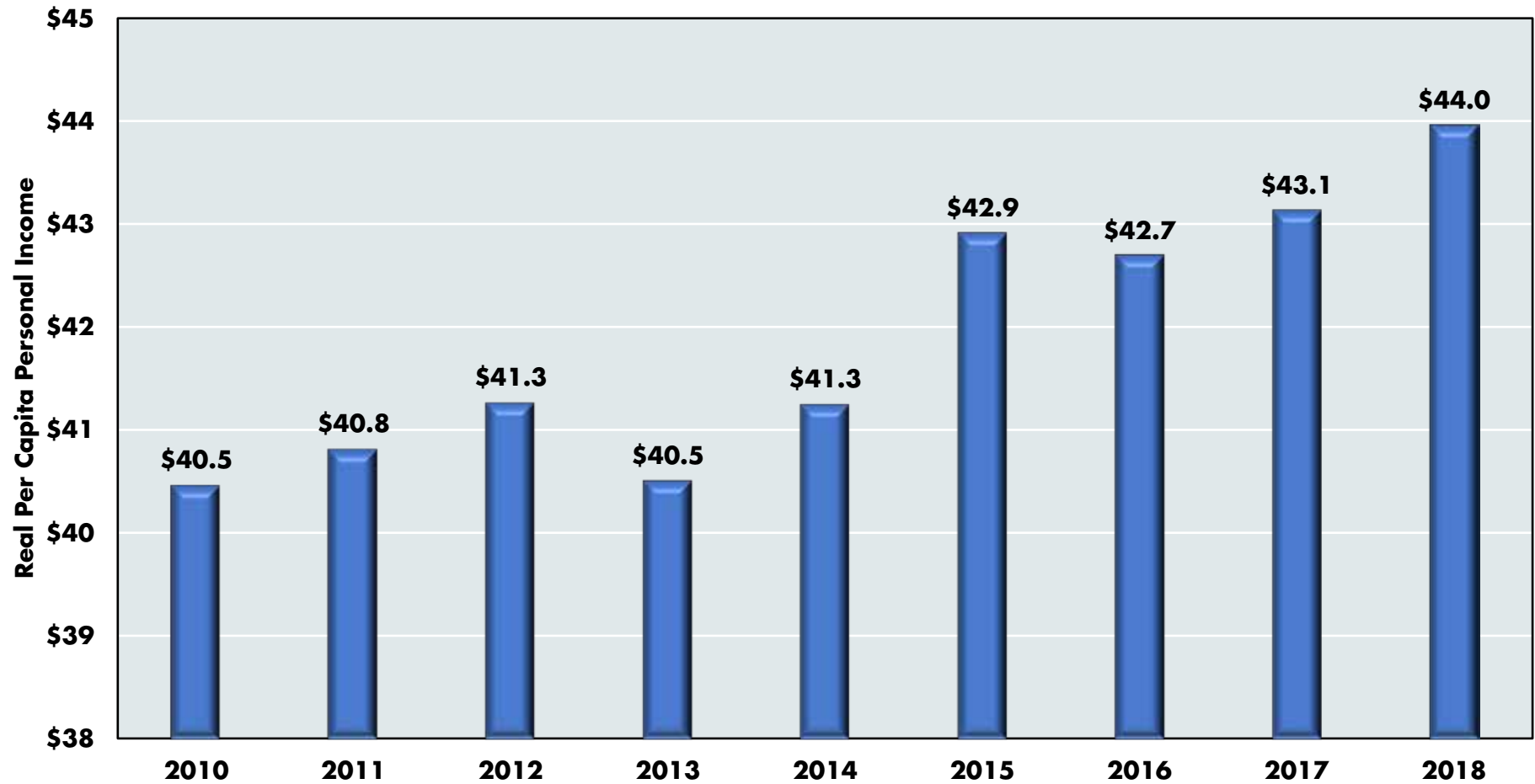
As illustrated in Graph 2, real personal income per capita in Hampton Roads mirrored that of regional GDP in the last decade – a faltering start followed by a rising finish. From 2010 to 2018, this measure increased by 8.6%, but that measure conceals the true story. Real personal income per capita was the same level in 2013 as it was in 2010, reflecting the stagnation of the regional economy. From 2013 to 2018, however, real personal income per capita increased from \$40,500 to \$44,000, an 8.6% jump. We expect that, given the favorable economic conditions in 2019, real personal income per capita will have continued to grow in 2019.

While this is a modicum of good news, we must draw our gaze upon how the region performed relative to the state and nation. From 2010 to 2018, real personal income per capita in Hampton Roads grew at an average annual rate of 1%, below the 1.3% average annual growth rate for Virginia, and approximately half of the growth rate of 2% for the United States. While these differences may seem small, the cumulative nature of growth means that the region fell further behind the Commonwealth and nation from 2010 to 2018. It remains to be seen whether Hampton Roads' performance improved, relative to Virginia and the nation, in 2019.



GRAPH 2

**REAL PERSONAL INCOME PER CAPITA: HAMPTON ROADS, 2010-2018
(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

While real personal income per capita provides insight into how average income per person is changing over time, it is also important to examine how households are faring in Hampton Roads. In Graph 3, we use data from the U.S. Census Bureau to examine median household income by race and ethnicity.

Median household income for all households in Hampton Roads was \$65,604 in 2018, compared to \$72,577 in Virginia and \$61,937 in the United States. When we examine median household income by race, we find that several groups have higher levels of household income in Hampton Roads than the national average. Black and African American median household income was \$46,143 in 2018, above the national average (\$41,511), but below Virginia (\$50,064). Asians were the only minority group in the region to have a lower median household income than the national average.

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 4 illustrates median and mean net worth by race. The median wealth of white households was almost 10 times that of Black and African American households. Mean net housing wealth was lower for Black and African American households (\$94,400) relative to white households (\$215,800). Black and African American households also held a greater proportion of their wealth (37%) in housing compared to white households (32%). Lower levels of income and wealth decrease the ability of households to weather economic shocks, in particular those that undermine the value of housing.

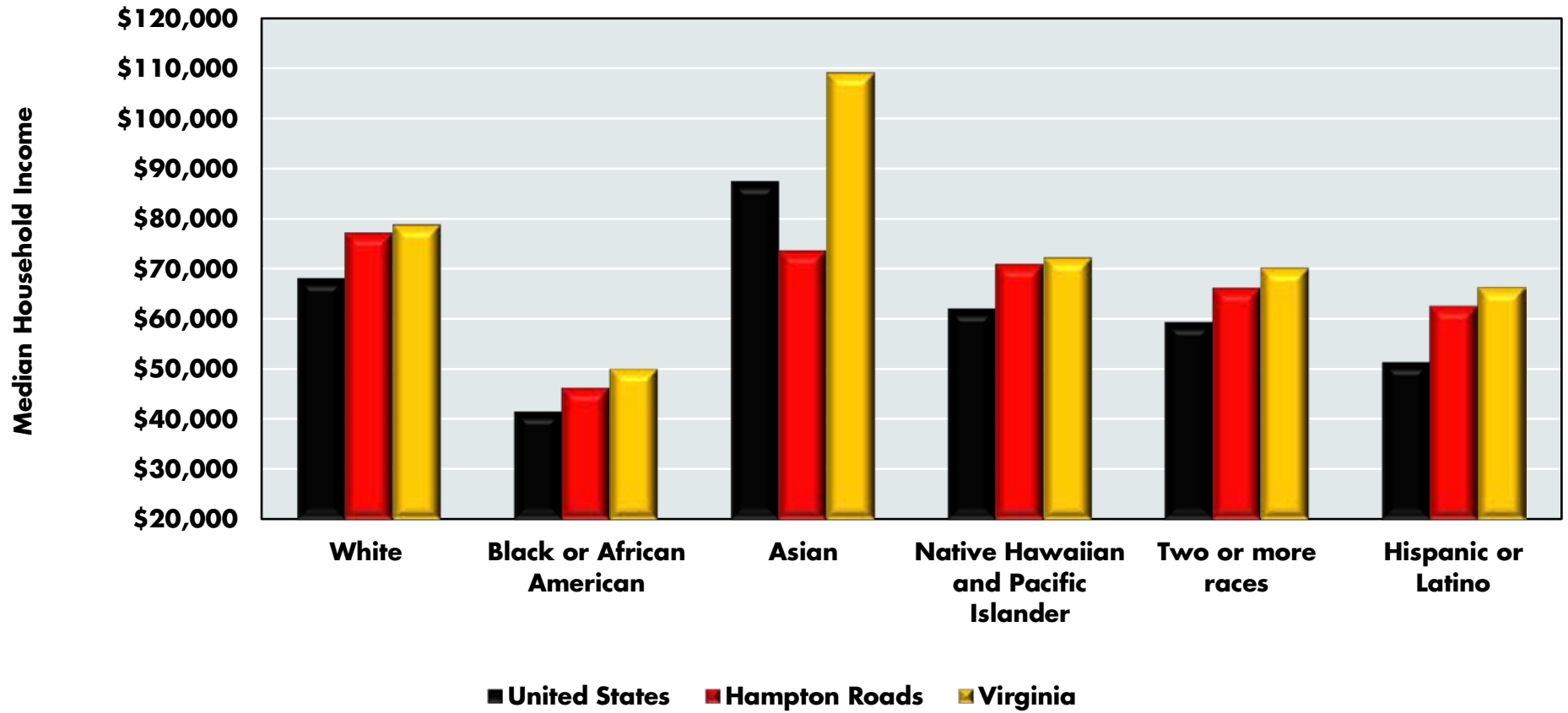
These inequities were accentuated by the Federal Reserve Bank’s accommodative monetary policies. In an effort to stimulate and sustain economic growth, the Federal Reserve maintained relatively low interest rates. As interest rates declined, capital flowed into equities and real estate in search of higher 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, leading 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 of 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, relative to whites and Asians, their gains in wealth were relatively small over the last decade.

GRAPH 3

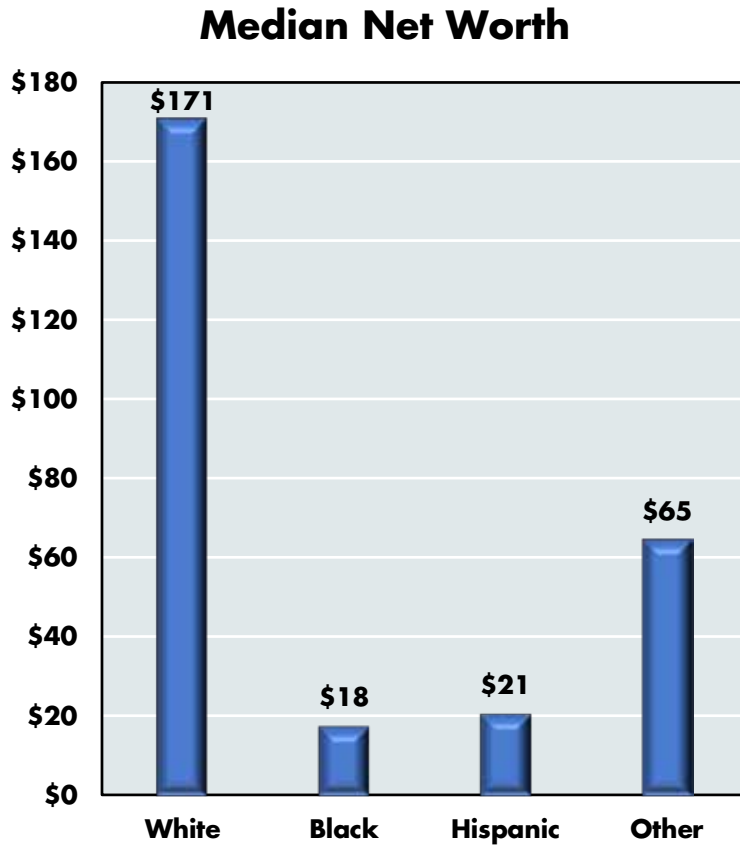
**MEDIAN HOUSEHOLD INCOME BY RACE AND ETHNICITY:
U.S., VIRGINIA AND HAMPTON ROADS, 2018**



Sources: U.S. Census Bureau, 2018 ACS 1-Year Estimates Subject Tables, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. In 2018 inflation-adjusted dollars.

GRAPH 4

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



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

Poverty Rate

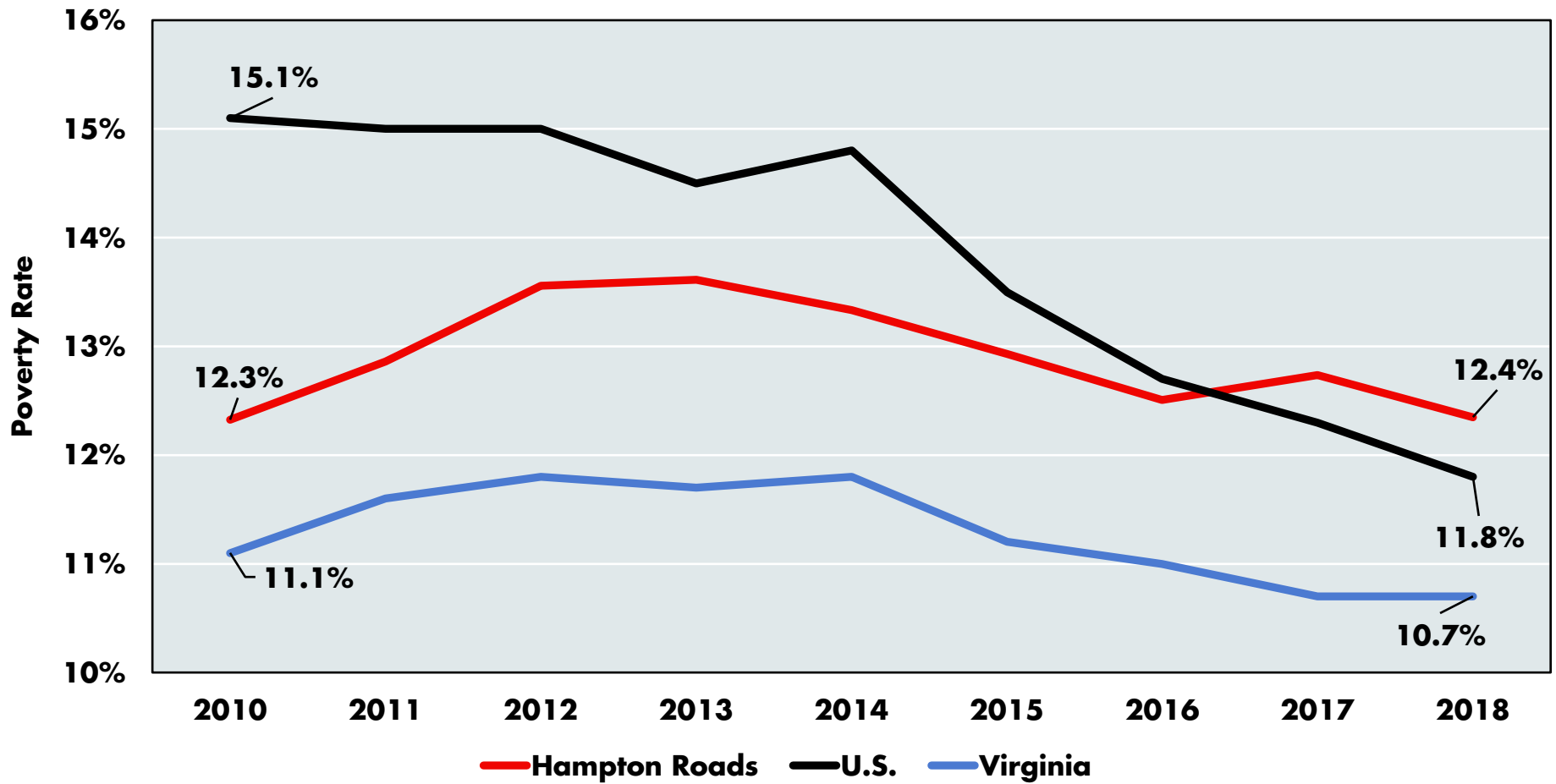
The U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the poverty threshold, then every member of the family is considered in poverty. The poverty rate captures the number of people in poverty relative to the population.

In 2010, the poverty rate in the United States had reached 15.1% as the aftereffects of the Great Recession continued to reverberate through the nation (Graph 5). However, as the national economy grew over the decade, the percentage of people in poverty fell. By 2018, the national poverty rate had fallen to 11.8% and likely declined in 2019.

In 2010, the poverty rate in Hampton Roads was 12.3%, almost three percentage points lower than the nation, though somewhat higher than the Commonwealth. Unlike the nation and the state, however, the poverty rate did not decline in the region from 2010 to 2018. In fact, the poverty rate increased slightly to 12.4% in 2018. Anemic economic growth, relatively stagnant private-sector job creation and tepid growth in personal incomes created significant headwinds against efforts to lower the poverty rate in Hampton Roads. Even with the projected growth in 2019, it is likely the poverty rate in the region did not change significantly. The persistence of poverty in the region and the nation is closely correlated with food insecurity, a topic we explore in more detail later in this report.



GRAPH 5
POVERTY RATE:
U.S., VIRGINIA AND HAMPTON ROADS, 2010-2018



Source: U.S. Census Bureau, Small Area Income and Poverty Statistics (SAIPE) and Current Population Survey Poverty Statistics 2010-2018.

Individual Employment Grows After A Slow Start

The civilian labor force is equal to the number of individuals in the population who are 16 years or older and employed or actively seeking employment.² As illustrated in Graph 6, the civilian labor force only grew by 3.1% from 2010 to 2019, significantly slower than the 1990s (9%) and 2000s (12.3%). As with other measures of economic activity, the labor force grew slowly in the first half of the decade (1.2%) compared to the second half of the decade (3.1%).

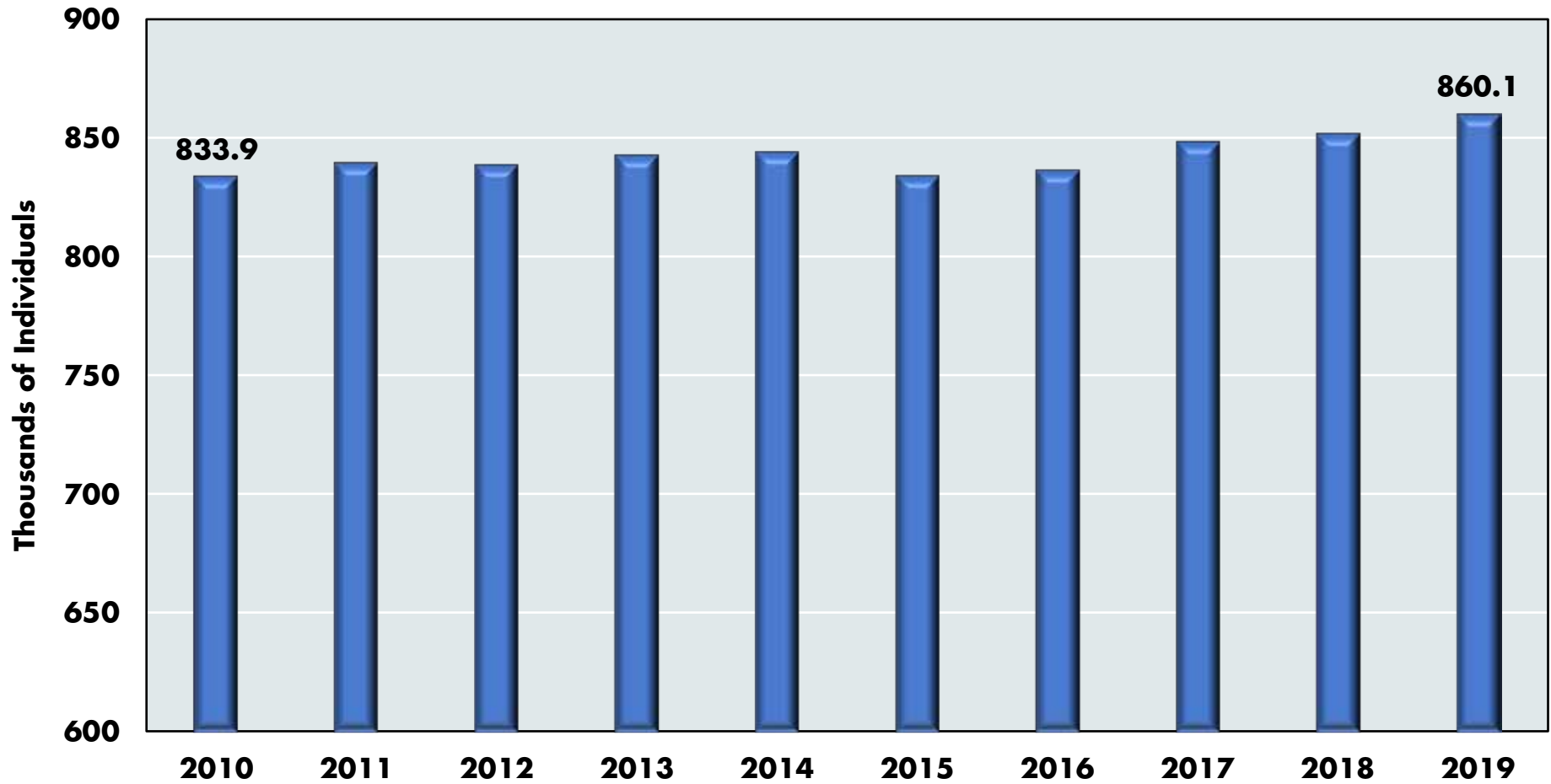
Individual employment increased by about 8.2% from 2010 to 2019, that is, almost 8% more residents of Hampton Roads reported they were working at the end of the decade than at the beginning of the decade (Graph 7). The impact of the 2008-2009 Great Recession continued to reverberate in the early years of the next decade as it took Hampton Roads nearly five years to return to the level of individual employment observed prior to the onset of the recession. Individual employment accelerated at the end of the decade, rising 5.1% from 2015 to 2019, and approximately 833,500 residents were employed in 2019.

With individual employment increasing more rapidly than the civilian labor force over the decade, the unemployment rate in Hampton Roads ended this period at 3.1%, less than half the level observed in 2010 (Graph 8). Entering 2020, the question for the region was how to increase the number of workers, especially skilled workers, across several industries.

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, 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.”

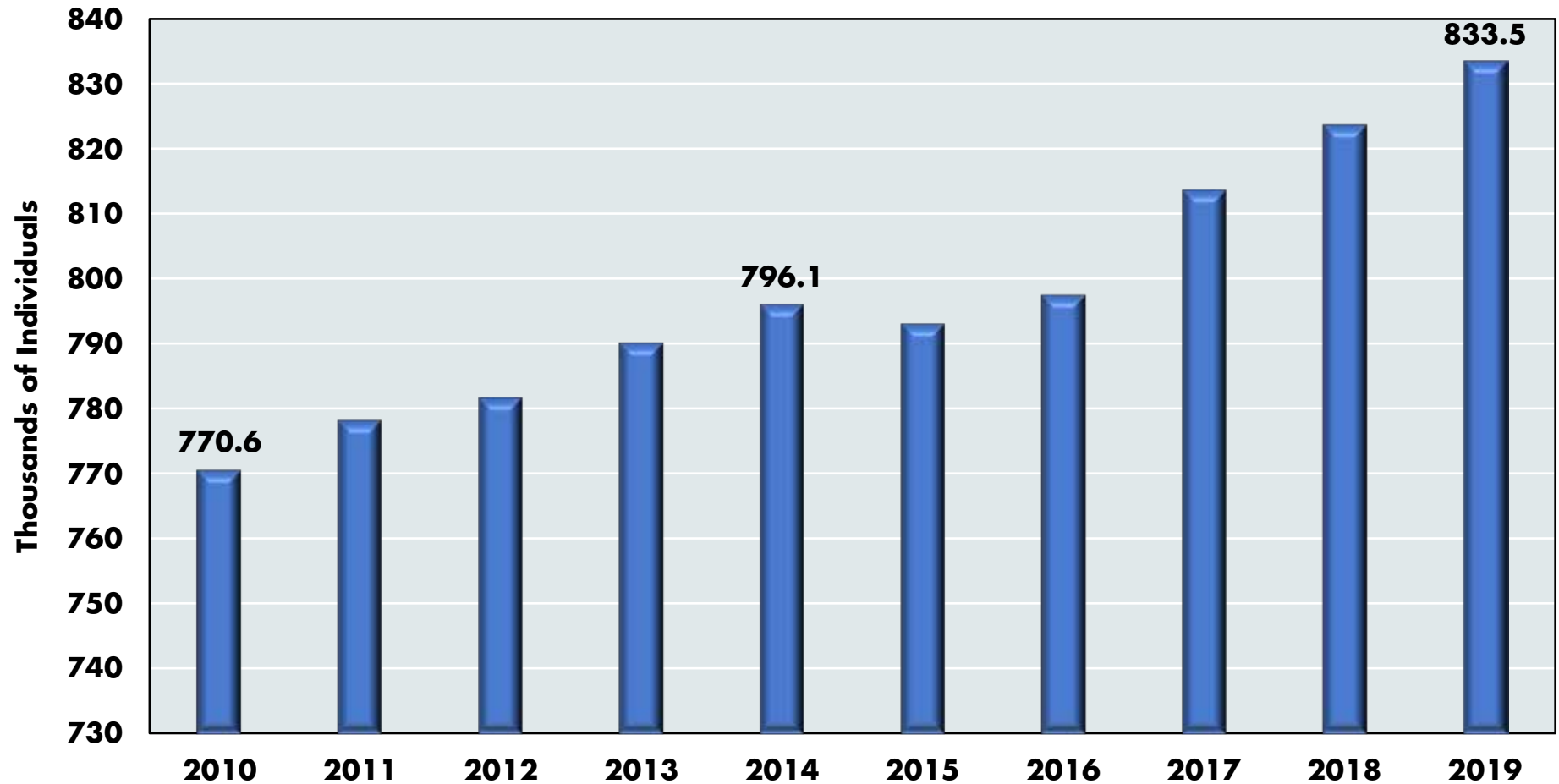
² The civilian labor force does not include members of the armed services or institutionalized members of the population.

GRAPH 6
CIVILIAN LABOR FORCE IN HAMPTON ROADS,
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.

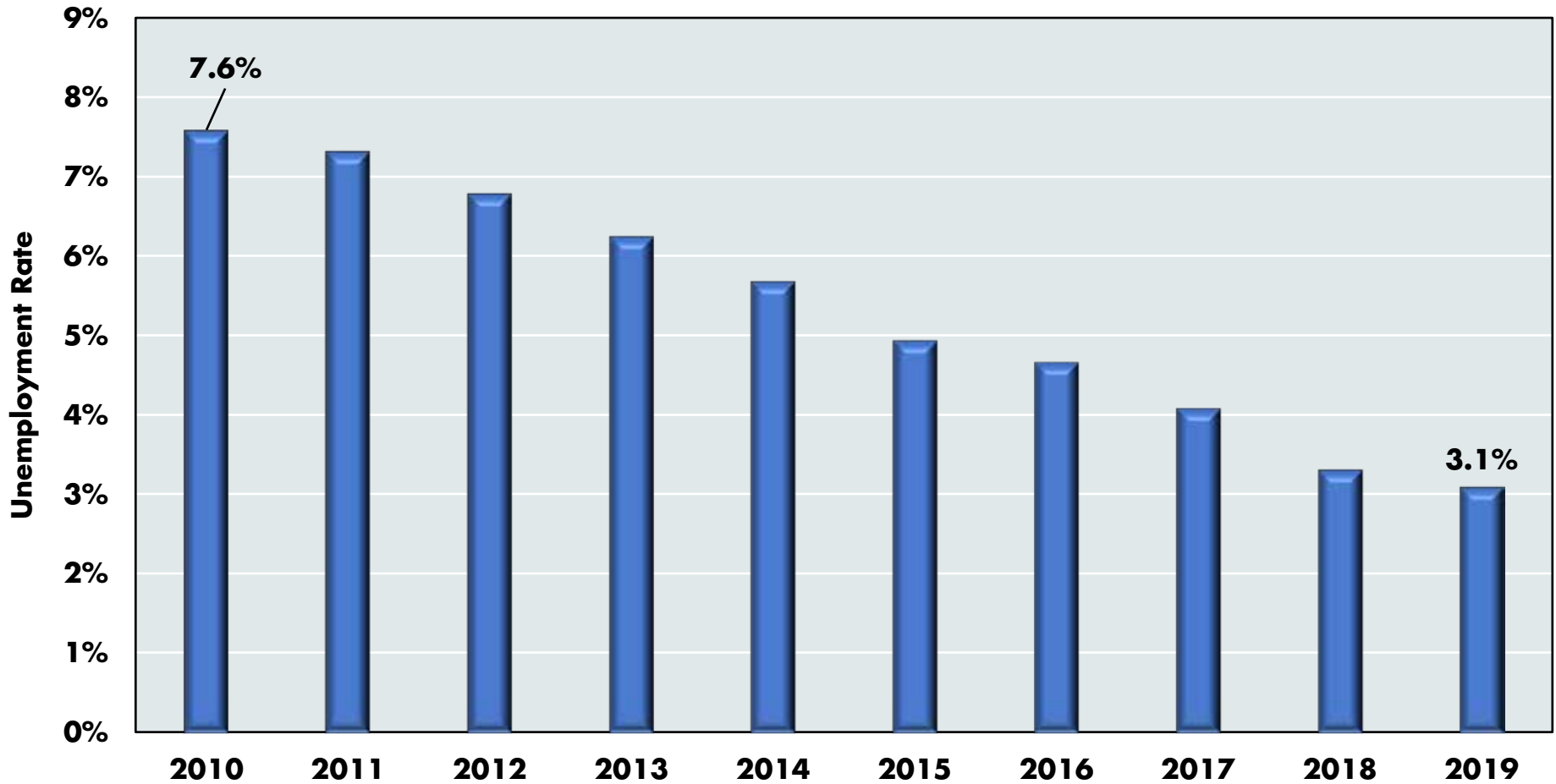
GRAPH 7
INDIVIDUAL EMPLOYMENT IN HAMPTON ROADS,
2010-2019



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 8

**AVERAGE ANNUAL UNEMPLOYMENT RATE IN HAMPTON ROADS,
2010-2019**



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

Weak Job Growth: Hampton Roads Falls Behind

As illustrated in Graph 9, Hampton Roads added 58,200 jobs over the 2010-2019 decade. It took the region 10 years to recover all the jobs lost during the Great Recession. To put this in perspective, it took Virginia 75 months and the United States 76 months to reach job levels equivalent to the prerecession peak. As seen in Graph 10, the number of jobs in Hampton Roads increased 7.9% over the decade, behind Virginia (11.3%) and the nation (15.8%). **On a proportional basis, for every job added in Hampton Roads over the decade, the nation added two.**

Hampton Roads also performed worse than most of the selected peer metropolitan areas (Graph 10). Only two of the 10 metros, Lynchburg (2.7%) and Roanoke (4.8%), fared worse than Hampton Roads in job creation. Most of the selected peer areas added jobs at more than twice the rate of our region, including the Raleigh, North Carolina, metropolitan statistical area, which added four jobs for every one job added in Hampton Roads.

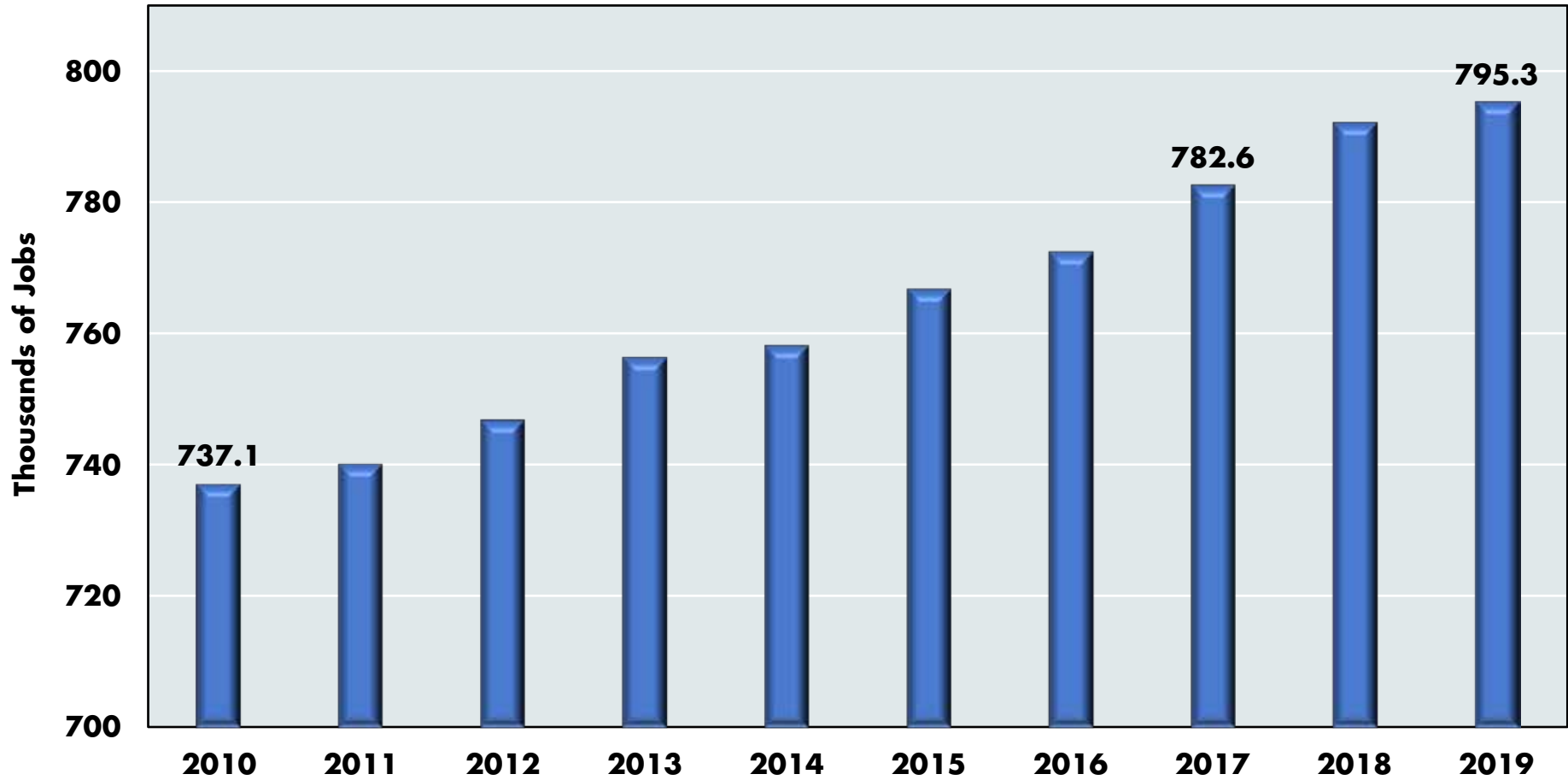
Taking a deeper dive into job growth, Graph 11 shows which industry sectors added or lost jobs over the decade. The largest gains were in the education and health services sector, which added 19,100 jobs, followed by professional and business services (15,800) and leisure and hospitality (9,100). The largest losses occurred in the local government (-5,900), information (-1,800) and state government sectors (-1,000). The absolute change in the number of jobs over the decade is quite small relative to the total number of jobs, illustrating how weak job growth was in the previous decade.

Fewer jobs in the information sector is concerning, given the region's goal of becoming a cybersecurity and information technology hub. However, a far more troubling sign for the region is the two industry sectors which added the most jobs over the decade, education and health services and leisure and hospitality, since they have been among those most significantly impacted by COVID-19 and associated measures, such as social distancing.



GRAPH 9

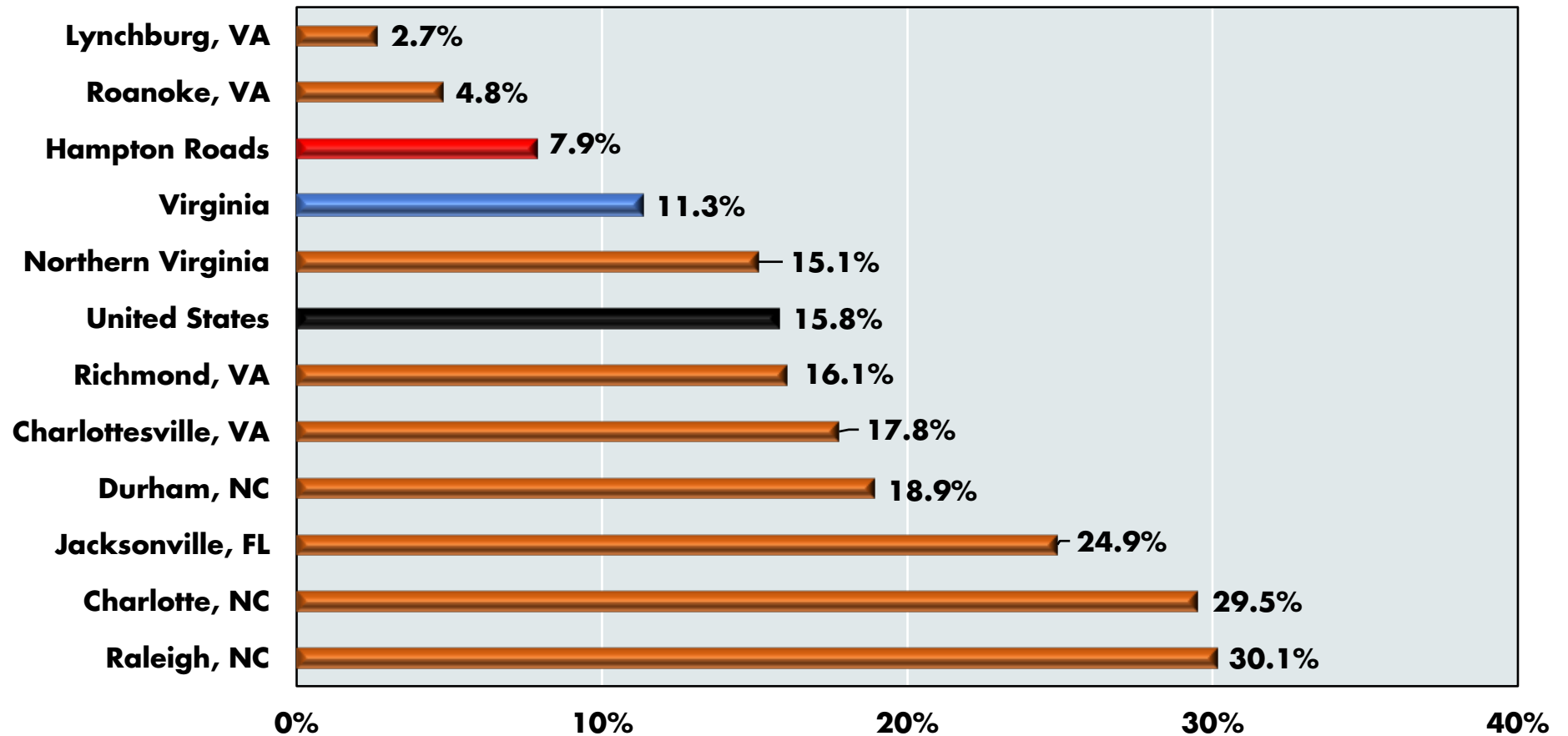
**AVERAGE CIVILIAN NONFARM EMPLOYMENT (JOBS):
HAMPTON ROADS, 2010-2019**



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 10

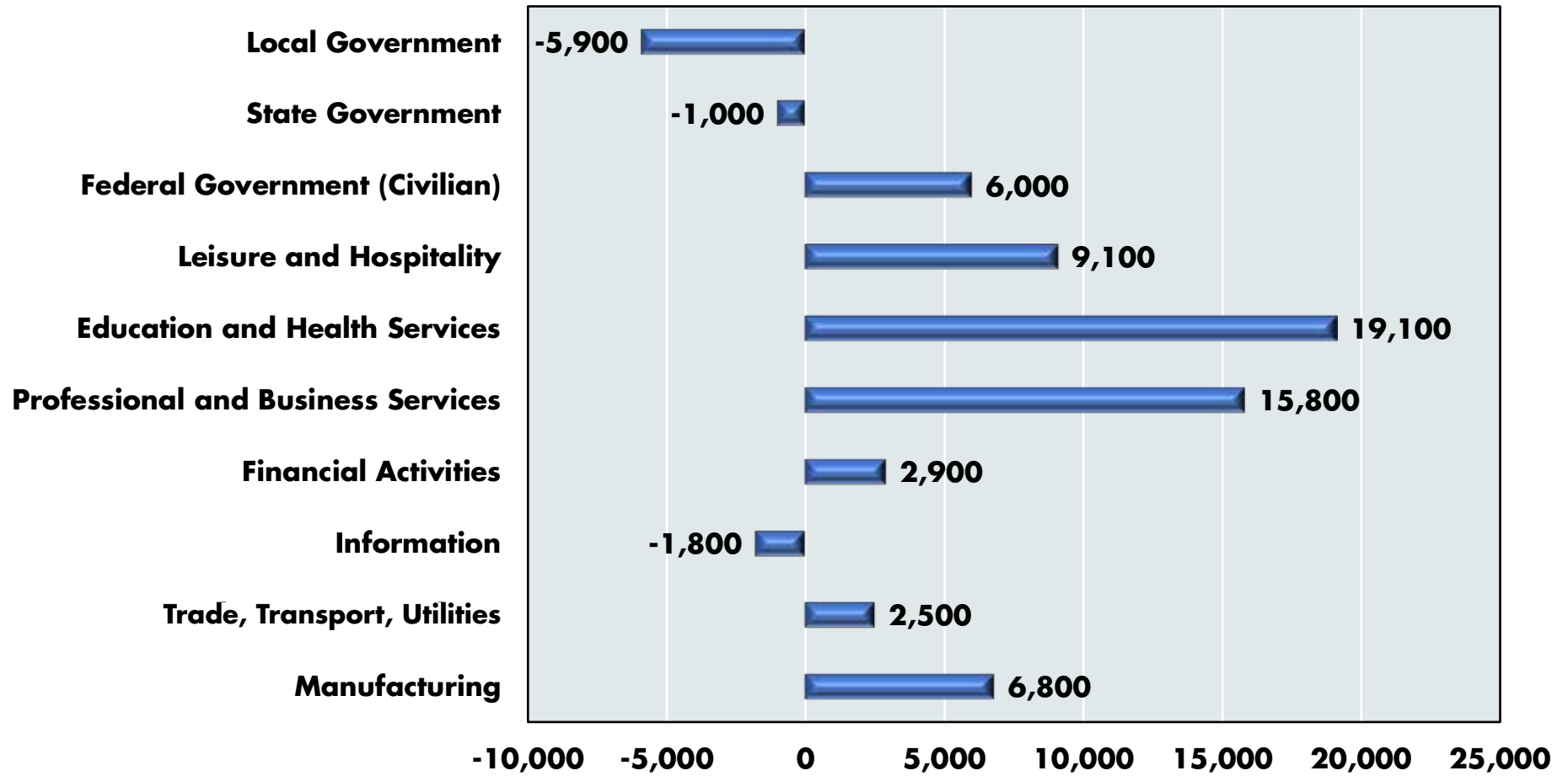
**PERCENTAGE CHANGE IN NET NEW CIVILIAN JOBS:
U.S., VIRGINIA, HAMPTON ROADS AND SELECTED METROPOLITAN AREAS, 2010-2019**



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 11

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



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

Federal Spending And Employment

The Department of Defense (DOD) is one of the three pillars of the Hampton Roads economy, and while times changed, the story remained the same over the previous decade. The region's economic fortunes have been closely tied to budgetary decisions made in Washington, D.C. As illustrated in Graph 12, direct DOD spending in Hampton Roads fell from \$19.8 billion in 2012 to \$18.9 billion in 2013. This reduction and subsequent stagnation of DOD direct spending tapped the brakes on economic growth in the region. It took another four years for direct DOD spending to finally eclipse the level previously observed in 2012.

The last years of the decade saw a rapid increase in direct DOD spending in Hampton Roads and, with it, a return to sustained economic growth. With approximately 40% of economic activity in the region tied in some way to DOD spending, it should be no surprise that the rapid increases fueled economic expansion. However, entering the new decade, questions remained whether these increases were sustainable, or whether future-spending increases would merely equal the rate of inflation. If the latter scenario proves true, then the prospects for future regional growth would certainly dim.

Graph 13 shows the number of military and federal civilians employed in the region from 2010 to 2018. While the number of military personnel stationed in Hampton Roads declined by 13,800 over the decade, the number of federal civilian employees increased by approximately 7,900 over the period. A recent news release from the U.S. Navy, however, suggests that the number of Navy personnel increased in the region in FY 2018.³ If this trend continues, it would bode well for the region's economic prospects.

Even while the region's total number of military personnel and federal civilian employees declined from 2010 to 2018, total compensation increased over the period. Graph 14 illustrates that, in 2018, the total compensation of military personnel and federal civilian employees was \$14.7 billion. The growth in total

compensation over the decade primarily has been driven by the increase in federal civilian employees.

Military personnel and federal civilian employees are "fiscal gold" for Hampton Roads. The federal government foots the bill, and the region benefits from the skills and compensation of these employees (as well as those of their family members in many cases). In 2018, average compensation for a private-sector job in Hampton Roads was \$43,136. The average compensation for military service members and federal employees in the region was \$96,985 and \$116,544, respectively. In other words, the compensation of a military service member equaled, on average, 2.2 private-sector jobs. For federal civilian employees, the ratio was 2.7 private-sector jobs per one federal job in Hampton Roads.

The challenge for Hampton Roads now is to leverage its strength with the federal government while fostering private-sector job growth. To say this will be difficult in the current economic environment is an understatement. However, to borrow an overused cliché, every journey begins with a single step. Let's take a look at some of the other segments of the regional economy and how they fared over the last decade.



³ https://www.cnic.navy.mil/regions/cnrma/news/economic_impact.html

GRAPH 12

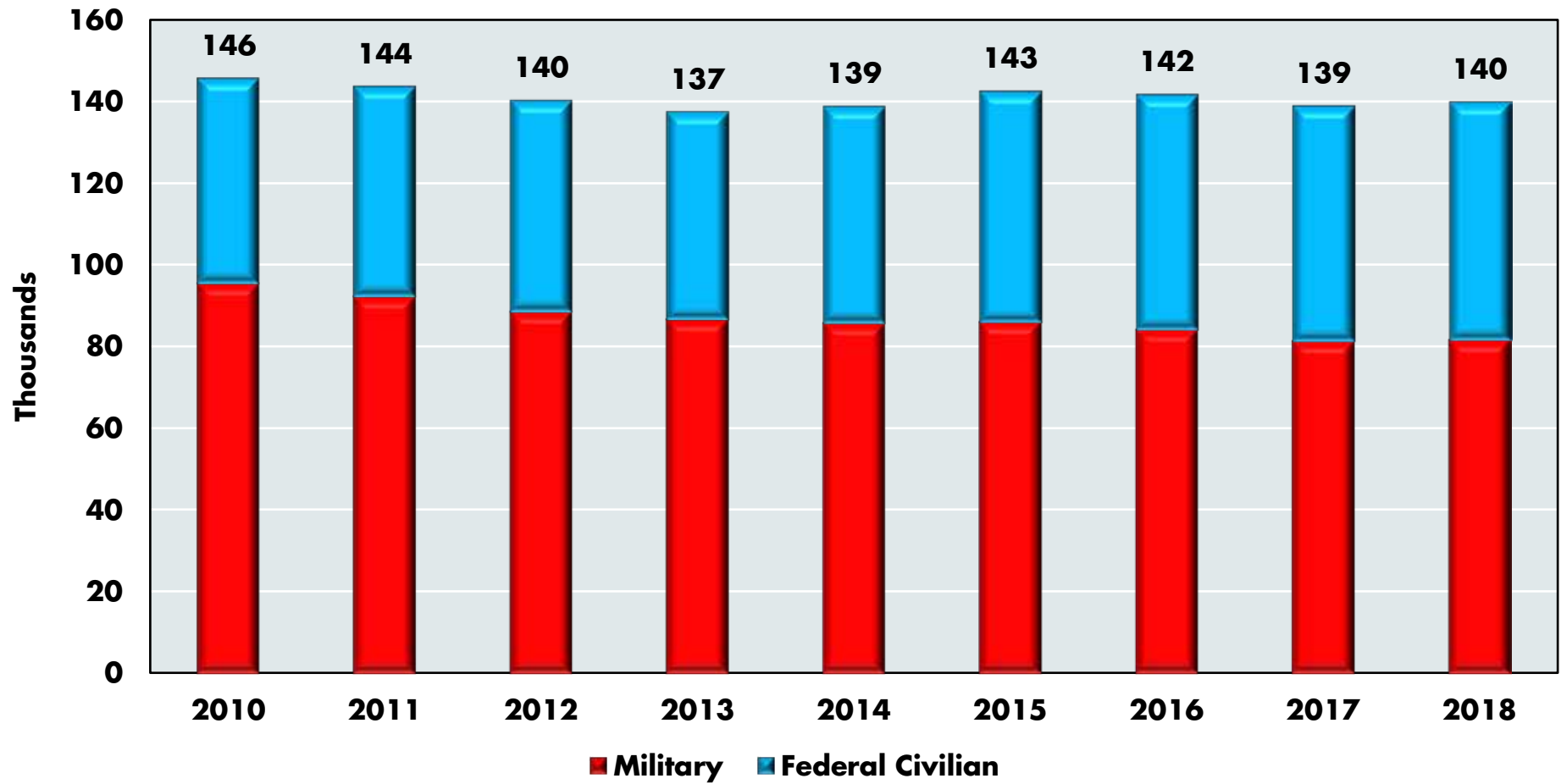
ESTIMATED DIRECT DEPARTMENT OF DEFENSE SPENDING:
HAMPTON ROADS, 2010-2019*
(IN BILLIONS OF NOMINAL DOLLARS)



Sources: U.S. Department of Defense and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Includes federal civilian and military personnel and procurement. *Data for 2019 are estimates. Last updated on April 5, 2020.

GRAPH 13

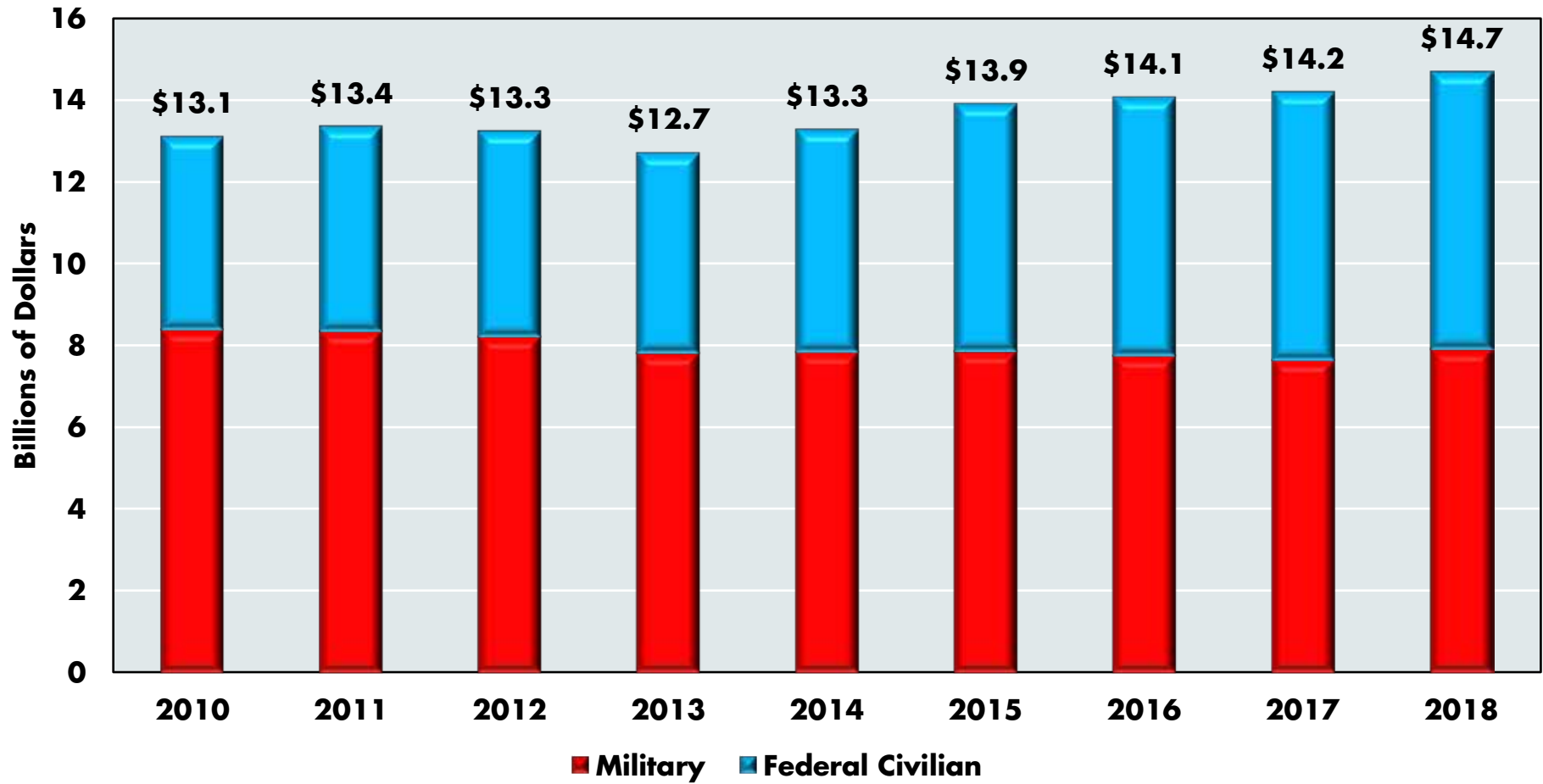
**MILITARY AND FEDERAL CIVILIAN EMPLOYMENT:
HAMPTON ROADS, 2010-2018**



Sources: Bureau of Economic Analysis, CAEMP25N, Total Full-Time and Part-Time Employment by NAICS Industry, and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 14

MILITARY AND FEDERAL CIVILIAN TOTAL COMPENSATION: HAMPTON ROADS, 2010-2018
(IN BILLIONS OF NOMINAL DOLLARS)



Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Last updated by BEA on Nov. 14, 2019.

The Port Of Virginia: A Promising Decade Of Growth

The Port of Virginia provides an example to the region of how effective leadership, wise investments and vision can change the fortunes of an organization. In the early part of the decade, the Port's finances were, at best, troublesome. By 2019, however, operating income (revenues minus expenses) rose from -\$18.64 million in 2010 to \$61.03 million.⁴ The Port was profitable and continuing significant investments were aimed at improving its efficiency and capacity.

Unlike the regional economy, which is more beholden to changes in federal defense spending, the Port is connected to the global economy. In 2009, for example, general cargo tonnage declined by 2.9 million tons as a result of the Great Recession. By 2013, cargo tonnage at the Port had not only recovered, but it exceeded its prerecession peak (Graph 15). General cargo tonnage levels increased by about 6.6 million tons over the decade. Faster growth might have occurred if not for capacity constraints and the fallout of an ill-advised trade conflict with China and other major trading partners.

While cargo tonnage increased over the decade, the Port's share of loaded 20-foot equivalent container units (TEUs) ended the decade where it started, at 16.5% (Graph 16). Among its major competitors on the East Coast, the largest port, New York-New Jersey, lost approximately 5.6% of its loaded TEU traffic. The Port of Savannah gained the most market share over the decade, rising from 22.9% of loaded TEUs in 2010 to 26.1% in 2019. One reason for the Port's inability to gain market share has been the relatively dynamic economic growth in the southeastern United States. Goods flow where there is demand, and growth in Georgia and surrounding states over the decade was superior to that of the Commonwealth.

The Port of Virginia made significant investments to bolster operations, which include the \$320 million expansion of the Virginia International Gateway (VIG) terminal in Portsmouth and the \$350 million expansion of Norfolk International Terminals (NIT). The completion of both expansion projects in 2020 should increase capacity by 1 million containers. As container ships have become larger, the ability to service larger cargo ships will be key to future growth.

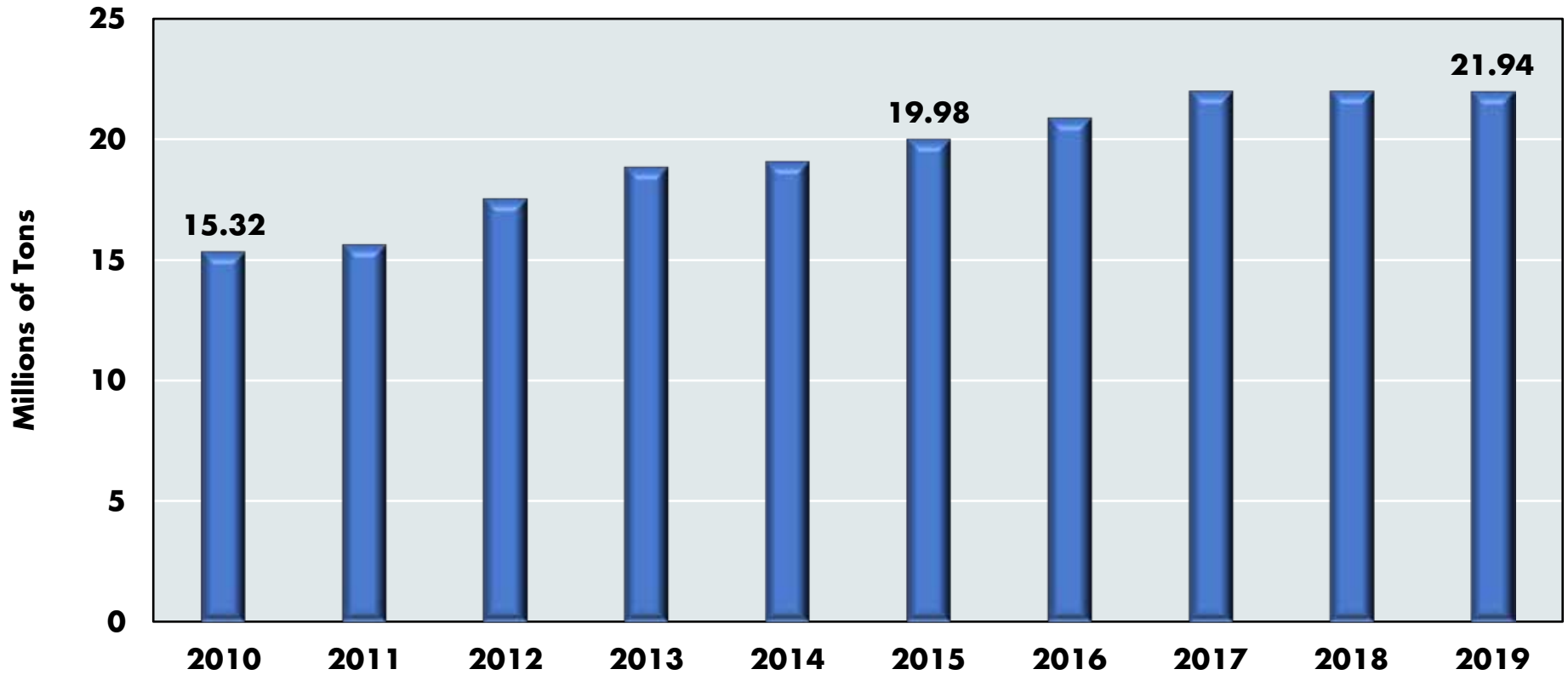
If one evaluated the Port of Virginia in the first half of the decade rather than at the end, the conclusions would be markedly different. Financial difficulties, the loss of market share and inefficiencies marred the operation of the Port, but the story did not end in 2015. The Port's financial turnaround is a hopeful sign of better times ahead.

Yet, even with new investments, the Port faces significant challenges. It must find a way to increase its market share. While some factors (trade wars and regional growth) may be outside the Port's control, the loss of market share over the second half of the decade is concerning. If the Port is no longer viewed as a necessary stop to deliver cargo to the Mid-Atlantic and other states, then financial difficulties may return. For now, the Port appears headed in the right direction, but it needs to pick up steam or face the prospect of falling behind its competitors to the south.

⁴ Virginia Port Authority, 2019 Comprehensive Finance Reports.

GRAPH 15

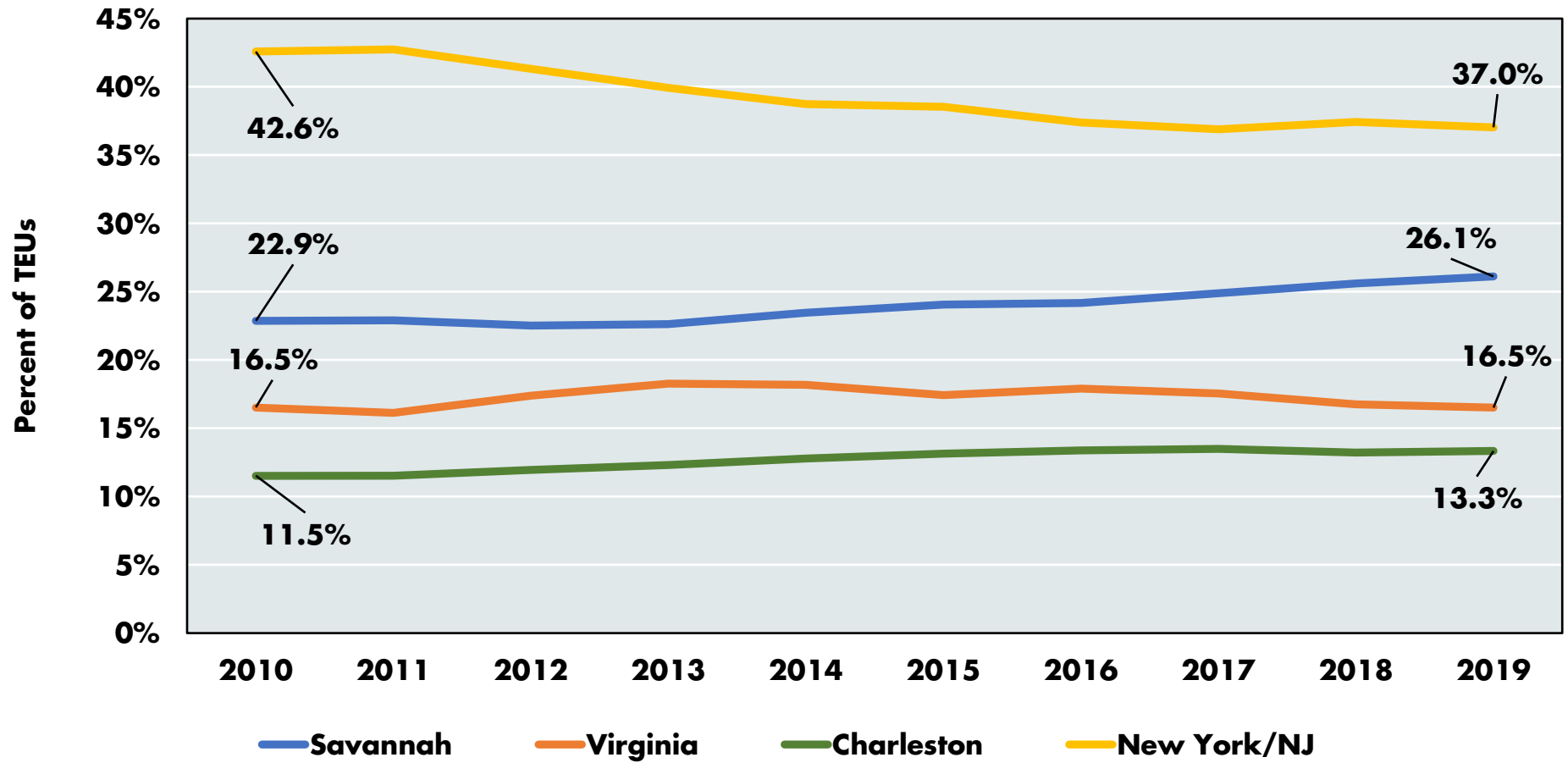
**GENERAL CARGO TONNAGE:
PORT OF VIRGINIA, 2010-2019**



Sources: Virginia Port Authority and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 16

SHARES OF TOTAL LOADED TEUS FOR SELECTED EAST COAST PORTS,
2010-2019



Sources: American Association of Port Authorities, port websites and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Market shares are based on TEUs for Baltimore, Boston, Charleston, Virginia, New York/ New Jersey and Savannah.

Hospitality And Lodging: A Decade Of Good News

The lodging and hospitality industries emerged as a bright spot in the previous decade. While many other sectors ebbed and flowed, the hotel sector exhibited growth over the entire decade in almost every category. Not only did hotel revenues and occupancy increase, but the region also ended the decade on a high note with the Something in the Water festival in April 2019.

Graph 17 shows two factors were in play in the hotel industry in Hampton Roads. First, the region had 3,000 fewer hotel rooms at the end of the decade than the beginning. Second, the average occupancy rate for rooms in the region increased as the decade progressed, reflecting smaller supply and the region's increasing popularity for travel and tourism. It should be no surprise that hoteliers were able to earn more revenue in nominal and real terms at the end of the decade than at the start of the decade (Graph 18).

The standard measure for determining the health of hotels is called Revenue per Available Room, or RevPAR. RevPAR accounts for the demand and supply of rooms – that is, the number of people who are willing to pay for rooms and the number of rooms available for rent. Graph 19 shows the percentage change in real RevPAR over the decade for the United States, Virginia, Hampton Roads and selected markets within the region. Real RevPAR in the Hampton Roads market increased 28.4% over the decade, above the Commonwealth (14%), but slightly below the national average of 31.1%. The Williamsburg submarket performed better than all the selected markets over the last decade, increasing 36.2%.

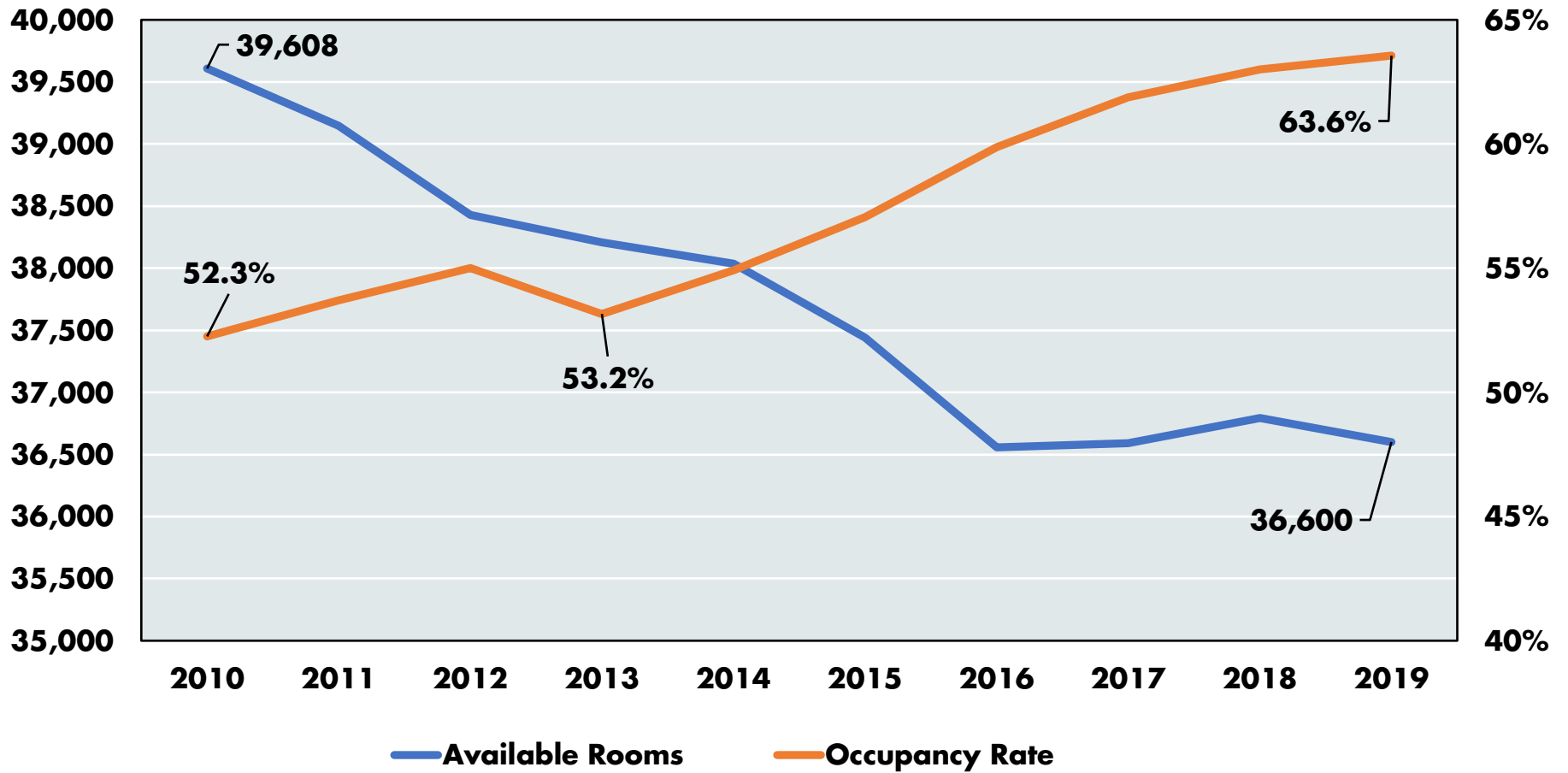
The ability of hoteliers to command higher prices for rooms is not only dependent upon fewer rooms and increasing demand. The decade saw the introduction of new, upscale hotels in the region, including The Main in Norfolk and the remodeled Cavalier in Virginia Beach. Several hotels also upgraded their rooms and facilities.

Our interviews with hoteliers strongly suggest that improvements in quality increased their ability to charge higher prices. This, in turn, created a virtuous cycle of development, where higher returns created an incentive for existing and new hotels to improve the quality of their lodgings. These efforts proved to be an economic boon for the region.

The performance of Hampton Roads hotels would likely have been even better if not for the emergence of the short-term rental industry. Airbnb, HomeAway, FlipKey and Vrbo introduced additional room supply to the regional hotel market, increasing competition especially during periods of peak demand. Airbnb, which is the largest online short-term rental firm in the region, saw rental revenues in Hampton Roads grow from \$3 million in 2015 to \$105 million in 2019. While we do not know exactly how much of this revenue would have flowed to hotels in the absence of these online short-term rental companies, there was undoubtedly some degree of substitution away from hotels to these companies. The continuing challenge for localities in Hampton Roads and throughout the Commonwealth is how to appropriately regulate these properties. We should expect this debate will continue well into the new decade.

GRAPH 17

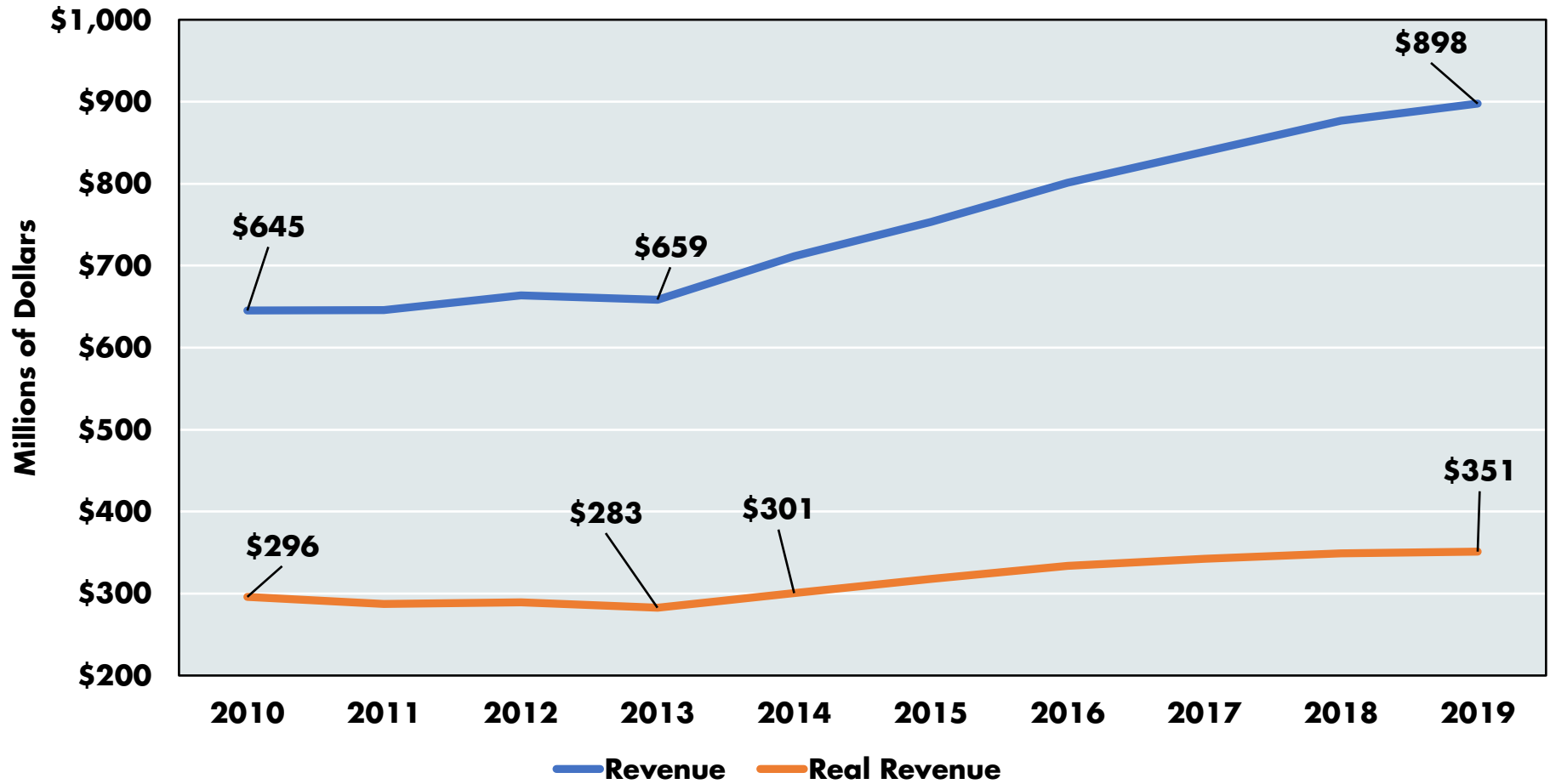
NUMBER OF AVAILABLE HOTEL ROOMS AND OCCUPANCY RATE:
HAMPTON ROADS, 2010-2019



Source: STR Trend Reports, Jan. 24, 2017, and Jan. 23, 2020

GRAPH 18

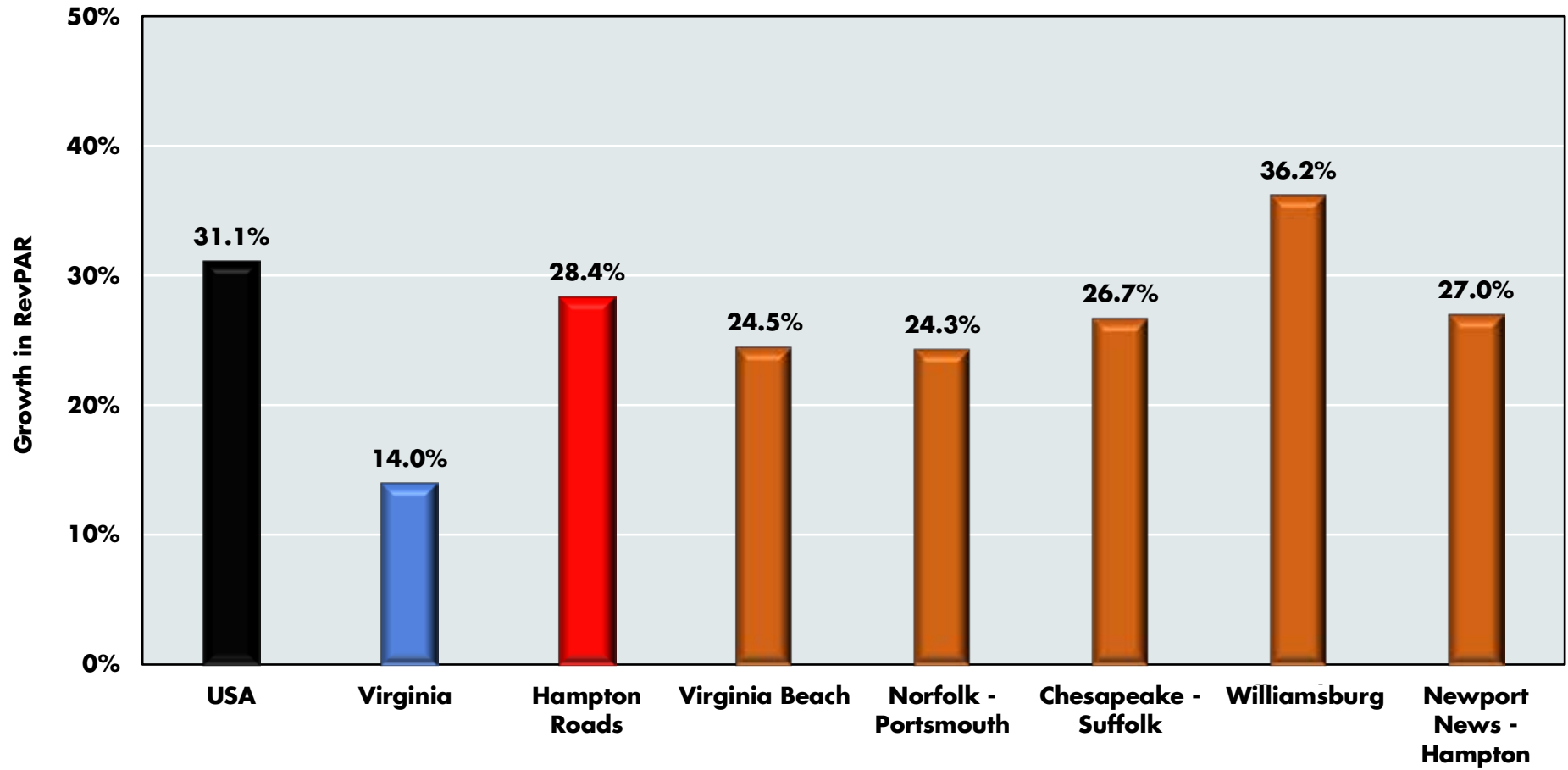
NOMINAL AND REAL HOTEL REVENUE:
HAMPTON ROADS, 2010-2019



Sources: STR Trend Report, various years; Bureau of Economic Analysis, Consumer Price Index for all Urban Consumers (base year is chained; 1982-84=100); and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 19

**PERCENTAGE CHANGE IN REAL REVPAR:
U.S., VIRGINIA AND SELECTED MARKETS IN HAMPTON ROADS, 2010-2019**



Sources: STR Trend Report, various years, and the Dragas Center for Economic Analysis and Policy, Old Dominion University

Single-Family Housing: Recovery And Growth

As with other parts of the Hampton Roads economy, the impacts of the Great Recession and defense sequestration lingered in the housing market during the recently completed decade. Single-family residential building permits peaked in the region at 7,555 in 2005 and had fallen to 3,149 by 2010. The decline in single-family permits from the prerecession peak is not unique to Hampton Roads, however, as the Great Recession appears to have shifted construction away from single-family to multifamily units in many metropolitan areas in the country. Even with these shifts, there was a recovery in housing permits. As illustrated in Graph 20, between 2010 and 2019, the number and value of housing permits rose by 35% and 53%, respectively.

The single-family residential sales market in Hampton Roads continued to be dominated by existing construction. As illustrated in Graph 21, new-construction single-family home sales grew by 47.9% from 2010 to 2019, but the increase was from 2,265 to 3,350 units sold. Existing home sales increased by 80.2% over the same period. **For every new single-family residence sold in Hampton Roads in 2019, almost eight existing homes were sold.**

Residential foreclosure filings are, depending upon one's perspective, either good or bad news. Over the decade, annual foreclosure filings fell from 12,800 in 2010 to 3,347 in 2019 (Graph 22). This good news is tempered by the realization that foreclosure filings in 2019 were still almost 60% higher in 2019 than in 2007. While the overall health of the real estate market appears to have improved in Hampton Roads, some residents still appear to be in financial straits, unable to meet their mortgage obligations.

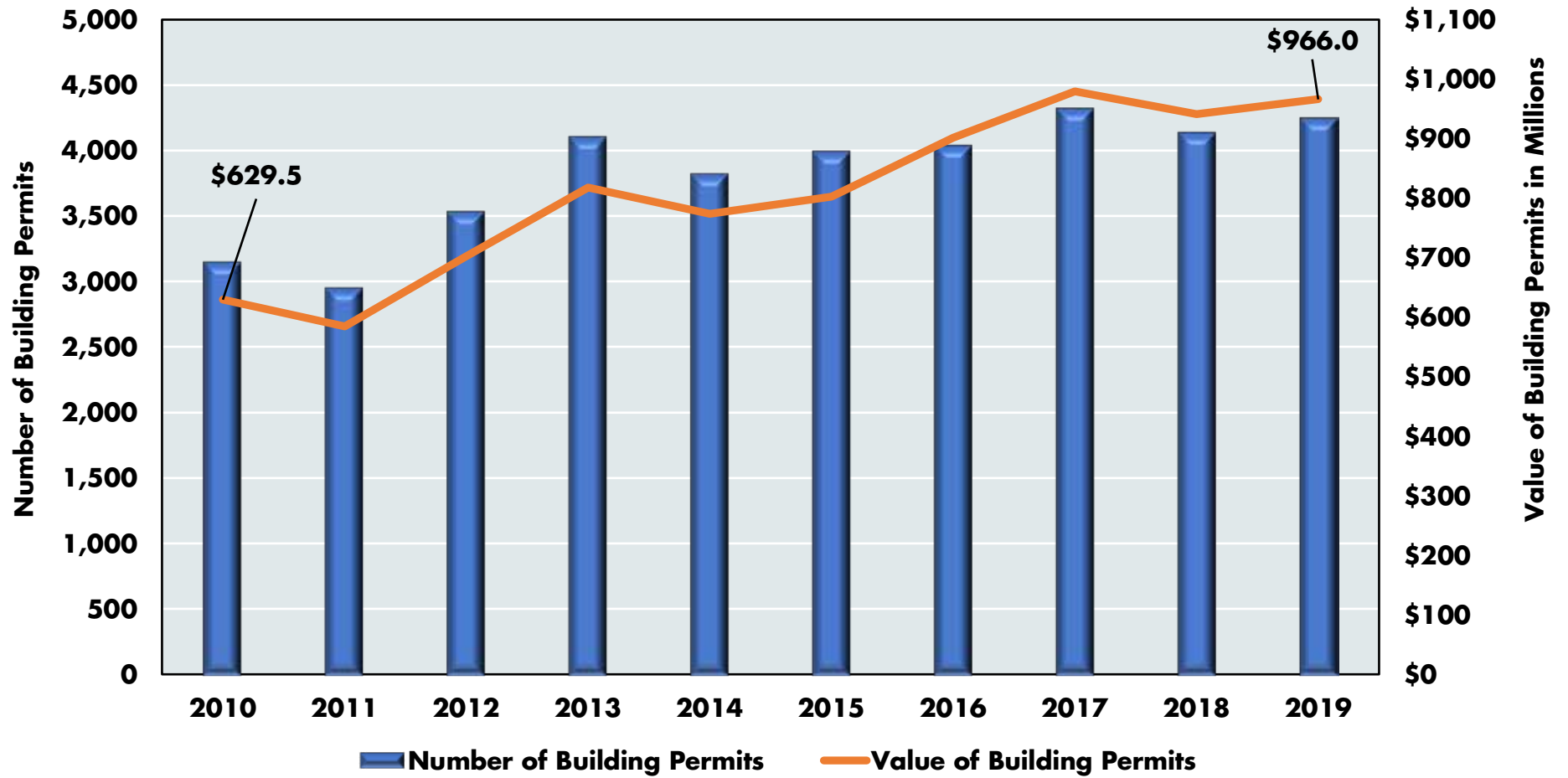
The single-family residential housing market ended the decade in a markedly improved position. Foreclosure filings were significantly lower and demand for homes continued to increase near the end of the decade. In response, the median sales price of existing homes in Hampton Roads, which had reached its nadir in 2011 at \$180,000, started to improve.

It was not until 2018, however, that median home prices for the region exceeded the prerecession peak. At the end of the decade, nominal median home prices exceeded the prerecession peak in all but three cities: Hampton, Newport News and Suffolk (Table 4).



GRAPH 20

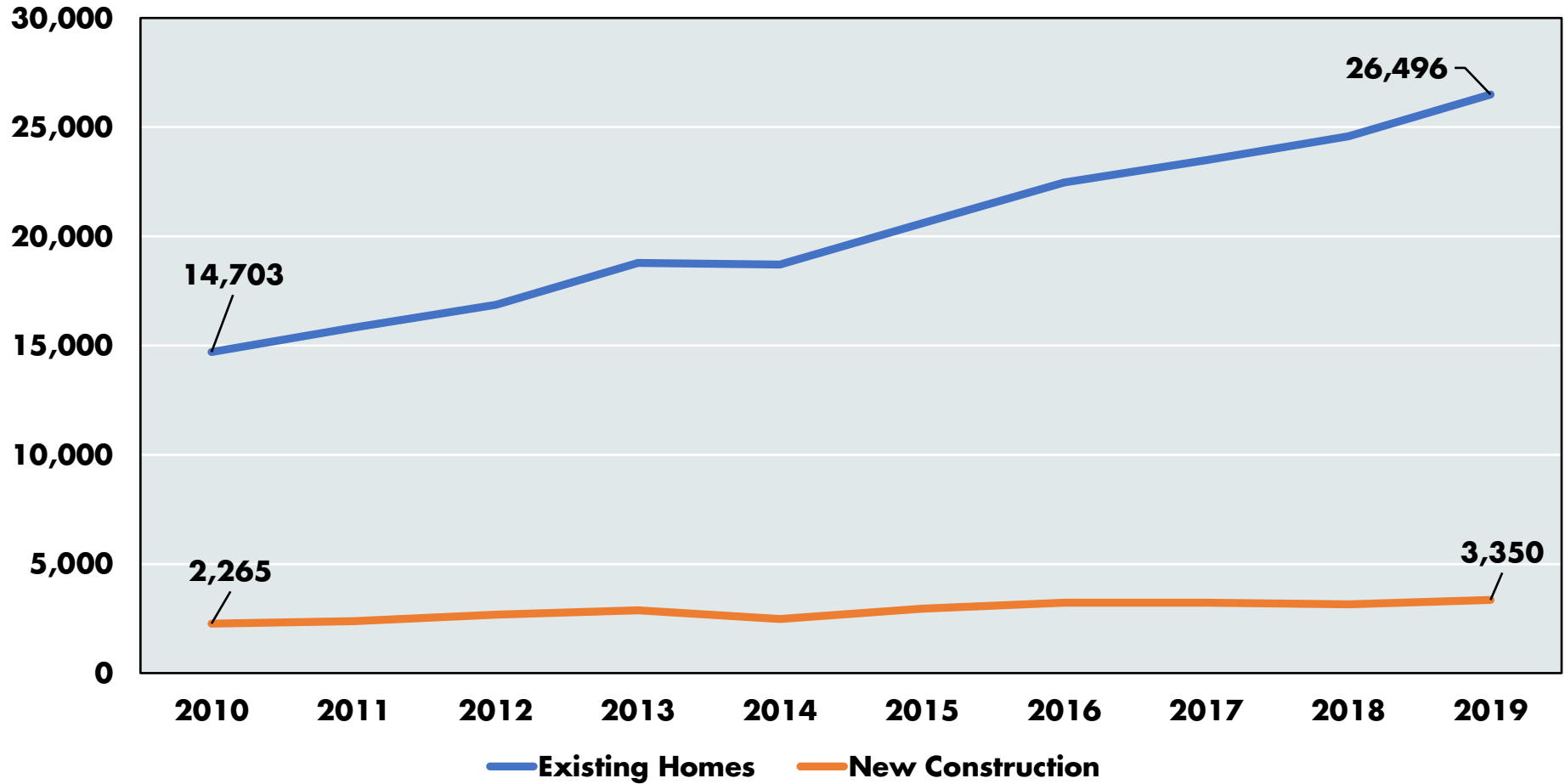
NUMBER AND VALUE OF ONE-UNIT SINGLE-FAMILY RESIDENTIAL BUILDING PERMITS:
HAMPTON ROADS, 2010-2019



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

GRAPH 21

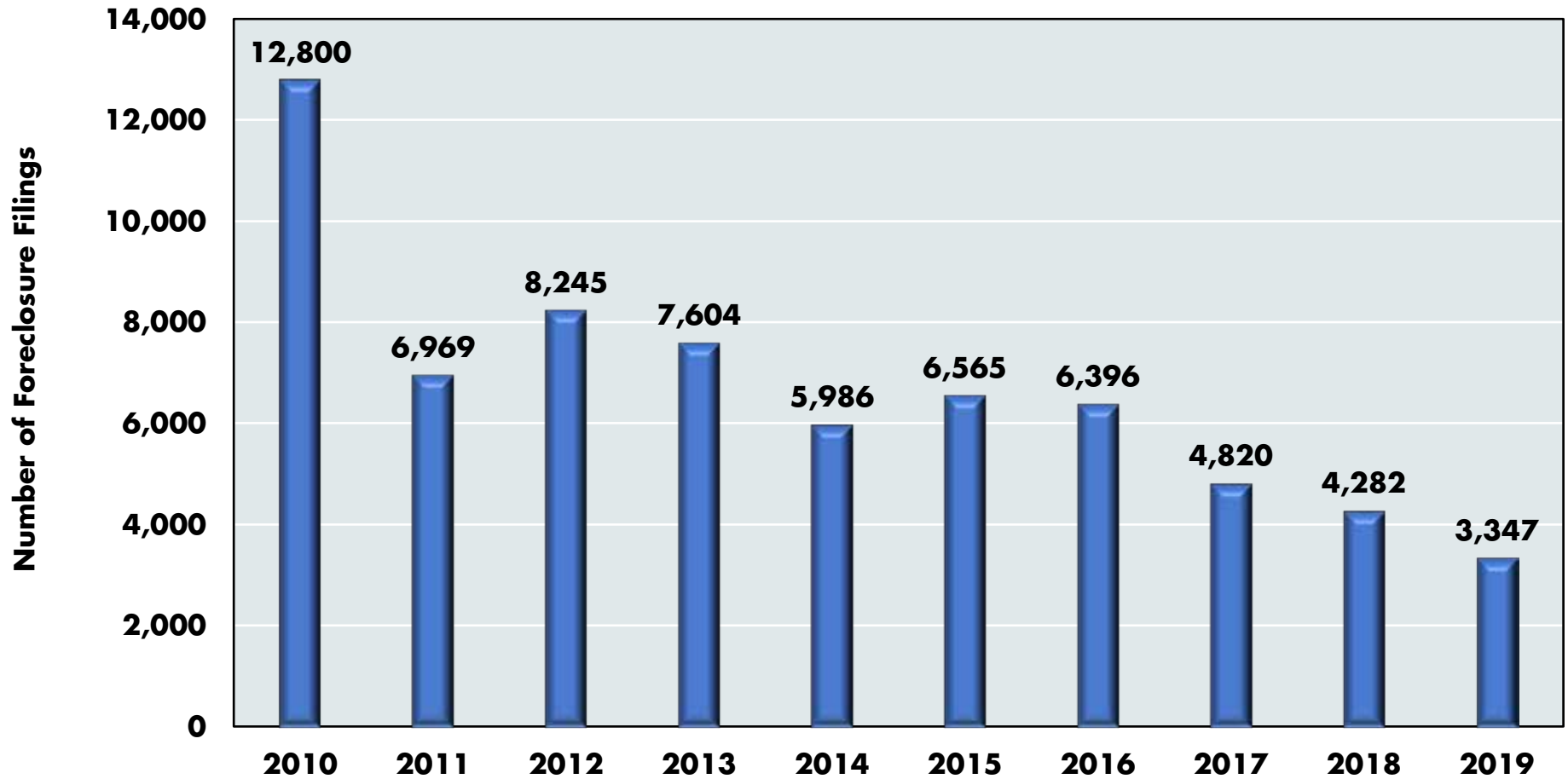
EXISTING AND NEW-CONSTRUCTION HOME SALES:
HAMPTON ROADS, 2010-2019



Sources: Real Estate Information Network (REIN) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all new-construction activity in our region.

GRAPH 22

**NUMBER OF RESIDENTIAL FORECLOSURE FILINGS:
HAMPTON ROADS, 2010-2019**



Sources: Attom Data Solutions (formerly known as RealtyTrac) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Filings include Notice of Trustee Sale and Real Estate Owned (owned by the lender).

TABLE 4**MEDIAN SALES PRICE OF EXISTING RESIDENTIAL HOUSING: SELECTED CITIES IN HAMPTON ROADS, 2007, 2010 AND 2019**

	Median Sales Price 2007	Median Sales Price 2010	Median Sales Price 2019	Percent Change in Median Sales Price 2010-2019
Chesapeake	\$250,100	\$230,000	\$265,000	15.2%
Hampton	\$180,000	\$155,000	\$173,250	11.8%
Newport News	\$199,250	\$171,900	\$185,000	7.6%
Norfolk	\$195,000	\$164,900	\$208,000	26.1%
Portsmouth	\$165,500	\$135,000	\$166,000	23.0%
Suffolk	\$257,500	\$214,800	\$252,750	17.7%
Virginia Beach	\$245,000	\$230,000	\$263,000	14.3%
Williamsburg	\$284,450	\$260,000	\$295,000	13.5%
Hampton Roads	\$223,000	\$203,900	\$234,000	14.8%

Sources: Real Estate Information Network and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Williamsburg represents Poquoson, Williamsburg, James City County, York County and Gloucester County.

Single-family Ownership Vs. Multifamily Rentals In Hampton Roads

Homeownership has long been the American dream; however, some would argue that increasing housing prices and relatively stagnant incomes have placed this dream out of reach for many Americans. While this narrative may be appealing, we must also recognize that other factors may be in play. Americans saddled with student loans and other forms of debt are less likely to purchase a home. Older Americans are transitioning into smaller homes or out of homes entirely. These factors have led to an increase in the demand for multifamily housing in Hampton Roads and in many metropolitan areas across the country.

Graph 23 compares median monthly rent in Hampton Roads to the monthly cost of homeownership, which includes the combined principal, interest and taxes paid. Prior to the Great Recession, it was cheaper to rent than to own in Hampton Roads. We will conclude by echoing the sentiments of previous State of the Region reports. In 2010, the cost of renting and owning was roughly equivalent. By the middle of the decade, owning (due to the relatively slow growth in housing prices and lower mortgage rates) was clearly preferred to renting. At the end of the decade, owning still provides a financial advantage to renting in our example, although the gap between the two has narrowed considerably from earlier in the decade.

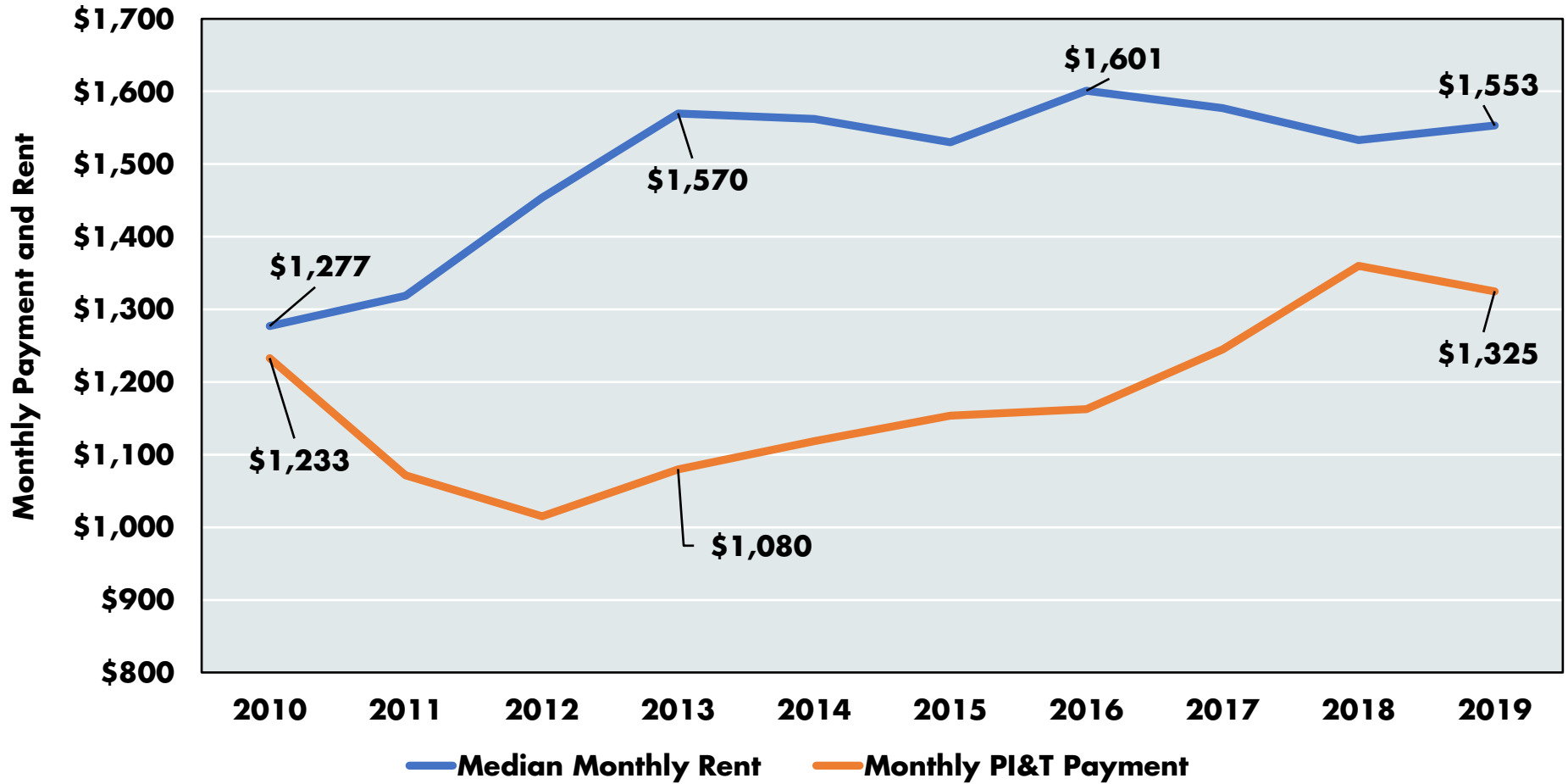
While the monthly cost of homeownership may be favorable to renting, it only answers part of the question of home affordability. If housing prices are growing faster than wages, a larger percentage of monthly income will be needed to own a home. Graph 24 shows the median price of a home in relation to median income for the United States and Hampton Roads. For the median household in Hampton Roads, the percentage of income spent on housing declined over the decade.

In 2010, the median household in Hampton Roads would have paid 22.2% of its income in housing, declining to 20.1% in 2019. This trend compares favorably to the median household for the nation, which spent 24.9% of its income on housing in 2019.



GRAPH 23

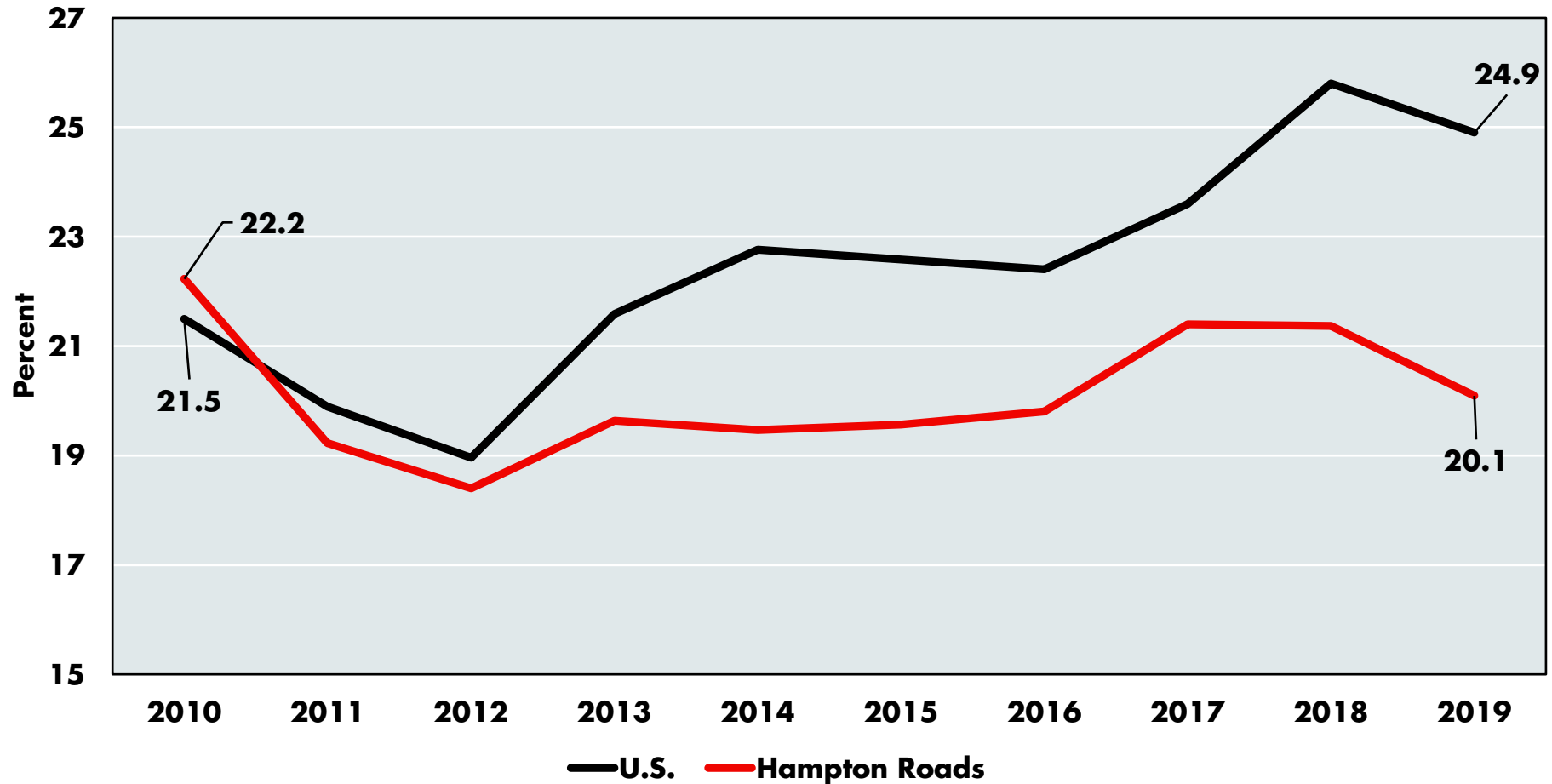
ESTIMATED HOUSE RENTAL AND PRINCIPAL, INTEREST AND TAXES FOR A HOUSE PAYMENT:
HAMPTON ROADS, 2010-2019



Sources: Department of Housing and Urban Development and the Dragas Center for Economic Analysis and Policy, Old Dominion University. It is assumed that the real estate tax rate is 1%, and the tax reduction received by homeowners would compensate for homeowner's insurance and maintenance expenditures. Prevailing 30-year average mortgage rate is used for each year.

GRAPH 24

MONTHLY PAYMENT FOR A MEDIAN PRICE RESALE HOUSE AS A PERCENTAGE OF MEDIAN HOUSEHOLD MONTHLY INCOME:
HAMPTON ROADS AND THE U.S., 2010-2019



Source: Department of Housing and Urban Development and the Dragas Center for Economic Analysis and Policy, Old Dominion University. It is assumed that the real estate tax rate is 1%, and the tax reduction received by homeowners would compensate for homeowner's insurance and maintenance expenditures. Prevailing 30-year average mortgage rate is used for each year.

Final Thoughts

From 2010 to 2019, one could, to paraphrase a famous novel, argue that it was “the best of times and worst of times” in Hampton Roads. One could easily look at the decade and conclude that the region fell behind Virginia and the nation and is likely to remain behind in the coming decade. We must be honest and recognize that many of the problems that were identified at the start of the decade remained at the end of the period. These challenges, including regional collaboration, inequalities in education, income and wealth, and concerns regarding racial equality, persist.

Yet, it would not be accurate to say the decade was lost. Defense sequestration is unlikely to be repeated soon. The Port of Virginia transformed its operations and ended the latest decade in a much stronger position than where it started, although it continues to be challenged in its efforts to increase market share. The hotel and tourism sector continued to grow and ended the decade with a record year in terms of revenues. The housing sector had mostly recovered (slowly) from the Great Recession but that worked to the region’s advantage in terms of attractiveness regarding the cost of living.

We do, however, need to express a cautionary note about the region’s dependence on federal and, specifically, defense spending. Hampton Roads’ role in national security depends, in some part, on the building, maintenance and training of legacy systems. As weapons systems (ships, planes and, yes, people) have become more expensive, the ability of the nation to afford large numbers of these systems is diminished. Advances in anti-ship missile technology, for example, serve to push the engage envelopment for carriers beyond the range of many ship-borne aircraft. When a ship or submarine costs billions of dollars, risking it becomes an increasingly hazardous proposition. If the DOD decides to change course and invest instead in smaller, cheaper and relatively more autonomous systems, the flow of defense funds to the region could change dramatically in a short period of time.

While the region desires to move toward emerging technologies and systems (cybersecurity, for example), it is at a competitive disadvantage relative to Northern Virginia and other regions. Federal spending will continue to play a role in the regional economy, but it is likely to diminish in the coming years. Recognizing these changes and fostering an environment conducive to private-sector growth are paramount for the region to grow.

We will conclude by echoing the findings of previous reports. Hampton Roads must leverage its strengths, particularly with regard to support from the federal government, in order to foster private-sector job growth. To do so, it must continue to promote regional collaboration and seek efficiencies among local governments in the region. The recent collaboration between Virginia Beach and Norfolk on tourism advertising is a welcome development and hopefully a signal of increased cooperation in the future.

Longer-term investments in the quality of K-12 education and transportation infrastructure are needed as well, as is a concerted effort to adapt to climate change. These actions will be neither easy nor cheap, but we should recognize that the cost of inaction is an economically stagnant region that, in time, will lose population as well as its ability to adapt economically and socially. To paraphrase the Roman poet Horace, we should continue our efforts to move forward, be bold in the pursuit of these policies, and, finally, venture to be wise by learning from the past.



Anxiety And Stress In The Workplace



ANXIETY AND STRESS IN THE WORKPLACE

A day of worry is more exhausting than a week of work.
– John Lubbock, English statesman, banker, scientist and polymath

Most people feel stressed, anxious or worried at some point during their day. In small amounts, stress or worry can be a good thing. A new deadline at work or an upcoming performance review can motivate us to stop procrastinating and work harder on the task at hand. As the English writer Samuel Johnson aptly noted, “When a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully.”

Yet, the COVID-19 pandemic is not only a public health crisis; it is, for some, a mental health crisis. Social distancing, unemployment and daily discussions of the toll of COVID-19 have increased worry and stress. The workplace is just, for the lack of a better word, different. While we may have found humor in a co-worker forgetting to mute him- or herself on Google Meet, Microsoft Teams, Skype or Zoom, many of us found little to smile about from needing to work remotely, having reduced hours or being furloughed or unemployed due to the recession. Work in the reopened economy, for now, includes temperature checks, masks, plexiglass shields and restrictions on breakrooms and other common spaces.

Approximately 70% of workplace anxiety and stress costs arise from lost productivity (e.g., sickness absence, leaving the workforce early) and about 30% come from direct medical costs borne by health care systems. In 2016, the estimated annual cost per worker of workplace anxiety and stress in the United States was \$1,212.¹ Extending this result, we estimate that workplace anxiety and stress cost the Hampton Roads economy \$1.1 billion in 2019.

Uncertainty and a sense of helplessness associated with COVID-19 and social distancing led to increased anxiety among some Hampton Roads residents.² In March, in the midst of the pandemic, Gary Rotfus, a licensed clinical social worker in Virginia Beach, noted, “This is going to be a prolonged crisis and that’s probably the most difficult part of coping with it. That’s a challenge for all of us.” Therapists across Hampton Roads reported more patients asking about how to deal with anxiety and isolation resulting from the need to socially distance from family, friends and co-workers. Louis Miller, a clinical psychologist in Norfolk, said, “Anxiety takes us away from where we actually are, down the road where you don’t want to go.” Miller, who works with clients on improving mindfulness, further noted, “You have to focus on the right here, right now.”

1 J. Hassard, K.R. Teoh, G. Visockaite, P. Dewe and T. Cox, (2018), “The cost of work-related stress to society: A systematic review,” *Journal of Occupational Health Psychology*, 23, 1-17, doi: 10.1037/ocp0000069.

2 Katherine Hafner, “How to deal with the stress of coronavirus? Hampton Roads therapists offer advice as they move to virtual appointments,” *The Virginian-Pilot* (March 23, 2020).

The costs of workplace anxiety and stress extend beyond lost productivity due to workers taking sick days or medical leave. At least half of all employees spend an hour a week at work worrying, and one-fifth spend five or more hours a week consumed by worrying thoughts.³ With approximately 830,000 workers in Hampton Roads, worry and anxiety consumed over 60 million labor hours in 2019. Often these work-related feelings occur at home too. Employees in Hampton Roads believe that companies are moving at a faster pace, and with technology allowing us to work from almost anywhere, we are worried about falling behind and then anxious because we need to respond immediately to our boss, co-workers or customers.⁴

In this chapter, we define and differentiate anxiety, worry and stress as these conditions relate to workers and organizations. We explore who is more likely to feel worried and anxious because of work and how this impacts productivity and the bottom line. Most of the chapter focuses on subclinical levels of anxiety, meaning we discuss the milder levels of anxiety that people may feel periodically, as opposed to anxiety that reaches a clinical level requiring medication or therapy. We also focus on worker perspectives instead of organizational initiatives or policies. In addition, we address anxiety caused by work itself or typical workplace dynamics (e.g., concerns about work performance). For most of this chapter, we do not specifically focus on anxiety coming from other sources, such as feeling anxious about personal or family issues, although these feelings can spill over into the workplace. However, we close the chapter discussing more extreme circumstances, such as how the COVID-19 pandemic influenced employers and employees in Hampton Roads. Although successfully resolving these issues is hardly as easy as the song “Don’t Worry, Be Happy” might suggest, we conclude with recommendations for individuals and employers in the area.

³ <https://www.coloniallife.com/about/newsroom/2019/march/stressed-workers-costing-employers-billions>.

⁴ https://www.pilotonline.com/inside-business/article_bf28a5de-a819-11e9-8992-27fe096076b6.html.

A Primer On Workplace Anxiety And Stress

Workplace well-being can mean a lot of things. For some organizations, well-being is all about reducing the number of workplace accidents or addressing other safety issues. For other organizations, well-being means having high levels of employee engagement or job satisfaction. But what about other aspects of well-being, such as employees feeling worried or anxious at work or about work? Workplace well-being is such an all-encompassing term, covering topics ranging from occupational safety to employee wellness programs, that it’s not as useful for analysis. We focus instead on workplace anxiety and stress.

Stress, worry and anxiety are often used interchangeably in the workplace; however, there are subtle but important differences to understand. The American Psychological Association (APA) defines stress as an emotional response that has a physical manifestation (like an elevated heart rate or sweating) and an external trigger.⁵ Triggers may include a short-term work deadline or a long-term span of unemployment. The external trigger can create a “fight or flight” response in our bodies.

On the other hand, worry is a cognitive process and does not require an external trigger. Worry occurs when one dwells on a potential negative outcome. Worry, by itself, does not induce a physical response in our bodies. A worker who is consumed with thoughts about potential layoffs may be less productive or make poor decisions that lead to an actual negative outcome.

Anxiety encompasses worry and includes a physical response. Whereas worry consists of repetitive negative thoughts, anxiety constitutes these thoughts and a physical manifestation of these thoughts. An individual suffering from anxiety may exhibit physical strains such as tension, headaches or heart palpitations.⁶ Anxiety, however, is more generalized and persistent than stress and does not have a specific external trigger. Anxiety, unlike stress, persists even when deadlines are met or sales are made. An individual with anxiety

⁵ <https://www.apa.org/topics/stress-anxiety-difference>.

⁶ <https://www.nytimes.com/2020/02/26/smarter-living/the-difference-between-worry-stress-and-anxiety.html>.

may exhibit symptoms regardless of circumstances. According to the Anxiety and Depression Association of America, there is a high level of self-reported anxiety symptoms in the U.S. **Overall, 72% of individuals who have daily stress and anxiety report that this interferes with their daily lives in some way, and approximately 9% of adults are diagnosed with an anxiety disorder.**⁷

Why We Should Worry About Anxiety At Work

How organizations respond to concerns about anxiety and stress depends on a range of factors. In many military units, an ethos of “embrace the suck” exists – in other words, “This is bad, we know, deal with it.” Cavalier attitudes toward workplace anxiety and stress may lead to an environment that is hazardous to employees and the organization.

Attitudes toward anxiety and stress vary by organization. Police officers who reported higher levels of workplace anxiety earned lower job performance evaluations from their supervisors.⁸ Workers with higher levels of workplace anxiety were more likely to ruminate about work events when at home and were also rated as being less helpful by their co-workers.⁹ The impact of anxiety also includes individuals in the C-Suite, a term describing a business organization’s most senior executives. CEOs with higher work-related anxiety take fewer strategic risks. Furthermore, these CEOs surround themselves with supportive individuals, inhibiting their ability to recognize and respond to potential threats.¹⁰ All of these studies show that even milder, subclinical levels of anxiety still impact organizations.

⁷ <https://adaa.org/workplace-stress-anxiety-disorders-survey>.

⁸ J.M. McCarthy, J.P. Trougakos and B.H. Cheng, (2016), “Are anxious workers less productive workers? It depends on the quality of social exchange,” *Journal of Applied Psychology*, 101, 279-291, doi: 10.1037/apl0000044.

⁹ C. Calderwood, A.A. Bennett, A.S. Gabriel, J.P. Trougakos and J.J. Dahling, (2018), “Too anxious to help? Off-job affective rumination as a linking mechanism between work anxiety and helping,” *Journal of Occupational and Organizational Psychology*, 91, 681-687, doi: 10.1111/joop.12220.

¹⁰ M.J. Mannor, A.J. Wowak, V.O. Bartkus and L.R. Gomez-Mejia, (2016), “Heavy lies the crown? How job anxiety affects top executive decision making in gain and loss contexts,” *Strategic Management Journal*, 37, 1968-1989, doi: 10.1002/smj.2425.

A pair of deadly collisions at sea in 2017 led the U.S. Navy to the realization that its seafaring culture had fallen into a sense of complacency. Sailors were arriving at the fleet without basic seamanship skills.¹¹ “We’re not even training them to be sailors” was a refrain that U.S.-based officers were hearing from ships in the fleet.

With gaps in personnel and maintenance, sailors were asked to do more with less, leading to extended watches, poor training and increased levels of stress and anxiety. To change the culture, the Navy realized it needed to shift its focus, starting with Recruit Training Command. Not only is the Navy now emphasizing basic skills, it is also tackling the “tough it out” mentality that may have led to excessive risk-taking.

Classroom-based instruction on computers has been de-emphasized and replaced with practical evolutions – that is, the skills and techniques of basic seafaring, including firefighting, standing watch, navigation and other core competencies. The basic course is now tougher, with higher attrition, but the outcomes are better-prepared and more resilient sailors.

¹¹ Lauren Weber, “How the Navy Revamped Boot Camp,” *The Wall Street Journal*, March 29, 2020.

Not all the news is bad. Individuals who learned to reframe anxiety into a positive emotion experienced improved performance. By taking control of worrisome thoughts and redirecting them toward excitement, they created a more positive mindset about the potentially anxiety-inducing event.¹² Furthermore, supporting individuals who were experiencing anxiety did not lead to lower performance. While there may be times to “tough it out,” an accumulating body of evidence illustrates the negative consequences of keeping employees in a perpetual state of stress. Employers who are proactive may find benefits in terms of improved employee morale and, over time, increased productivity.

Chris Shelton is the co-owner of two businesses: Cure Coffeehouse in Norfolk and Smithfield and Cureo Coffee Liqueur. He’s also the former executive director of Startwheel, a nonprofit organization focused on mobilizing entrepreneurial growth in Hampton Roads. Shelton says, “You’re always worried about something when you own a business – it could be whether a new product will traction in the market, if profit margins are high enough to keep supporting employees or what’s going to happen next with the economy.” However, these worries don’t stall him. Instead, his mindset is that these concerns also represent possible opportunities for growth. The COVID-19 pandemic has created anxiety and stress among business owners, and Shelton and his staff responded with an entrepreneurial mindset. They recognized there were a lot of things beyond their control, including when the coffee shops could reopen inside for customers, but they worked hard and found new ways to deliver products and services that could generate revenue during both normal and abnormal situations.

¹² A.W. Brooks, (2014), “Get excited: Reappraising pre-performance anxiety as excitement,” *Journal of Experimental Psychology: General*, 143, 1144-1158, doi: 10.1037/a0035325.

Who Is More Likely To Be Worried About Work?

Although there is a large amount of national-level data about the prevalence of clinically diagnosed anxiety (in the form of generalized anxiety disorder and other anxiety-related disorders, such as social anxiety disorder), there is less information about the prevalence of anxiety and worry in the overall population. Graph 1 displays responses to the National Health Interview Survey from 2010-2018. While the percentage of respondents who reported being worried, anxious or nervous was mostly stable over time, there were signs that more people were anxious in recent years, with 63% of U.S. adults having at least some level of worry, nervousness or anxiety in 2018. Graph 2 highlights the frequency of how often individuals felt worried, nervous or anxious in 2018.

The last national survey that examined workplace worry and anxiety was in 2010. Although dated, it found that 30.2% of all individuals reported feeling some level of tension and anxiety on a daily, weekly or monthly basis. In general, more than 70% of these individuals who felt some worry and anxiety also believed that everybody has these feelings and that they are a normal part of life. Related to the study which found reframing can be beneficial, the 2010 survey found that 37.5% of individuals who felt some anxiety or worry also believed this was a positive feeling which helped them be productive and accomplish goals.

Of those who felt at least some regularly occurring anxiety, more than 31% said that this feeling of worry and anxiety was caused by the amount or type of work they were doing. Males reported feeling more worried about work than females by a 37.9% to 28.6% margin (Graph 3).

Examining differences by age, Graph 4 reveals that working individuals in the 30-39 age range reported the highest frequency of feeling worried because of work. Feelings of worry about work generally increased over time in one’s 20s and 30s and then decreased over time until retirement. There are likely many explanations for this trend, including employment stability and increased

tenure within an organization, as well as anxiety and worry occurring from other sources, such as children, other family members or personal health.

There also were differences regarding how many people reported feeling worried because of work in relation to levels of household income. Almost half of the individuals with household incomes over \$100,000 per year responded that they were worried because of work (Graph 5), whereas less than one quarter of individuals with household incomes under \$35,000 per year felt that their worry was caused by the amount or type of work they do. Money may not buy happiness but a different set of worries.

There are a number of potential explanations for why the source of worry differs by household income. Relatively low-income households may experience worry and anxiety in terms of food, housing and job security.¹³ If you are worried about where your next meal comes from or making the monthly rent payment, concerns about work, transportation and even health care may seem trivial in comparison. The immediacy of the “now” triumphs over longer-term concerns.

Relatively higher-income households may experience worry and anxiety in terms of health care, education costs and pressures to “keep up” with the neighbors.¹⁴ Access to reliable sources of food and housing are less of a concern for these households because employment is relatively secure. While the sources of anxiety and worry may be different, the end result is the same.

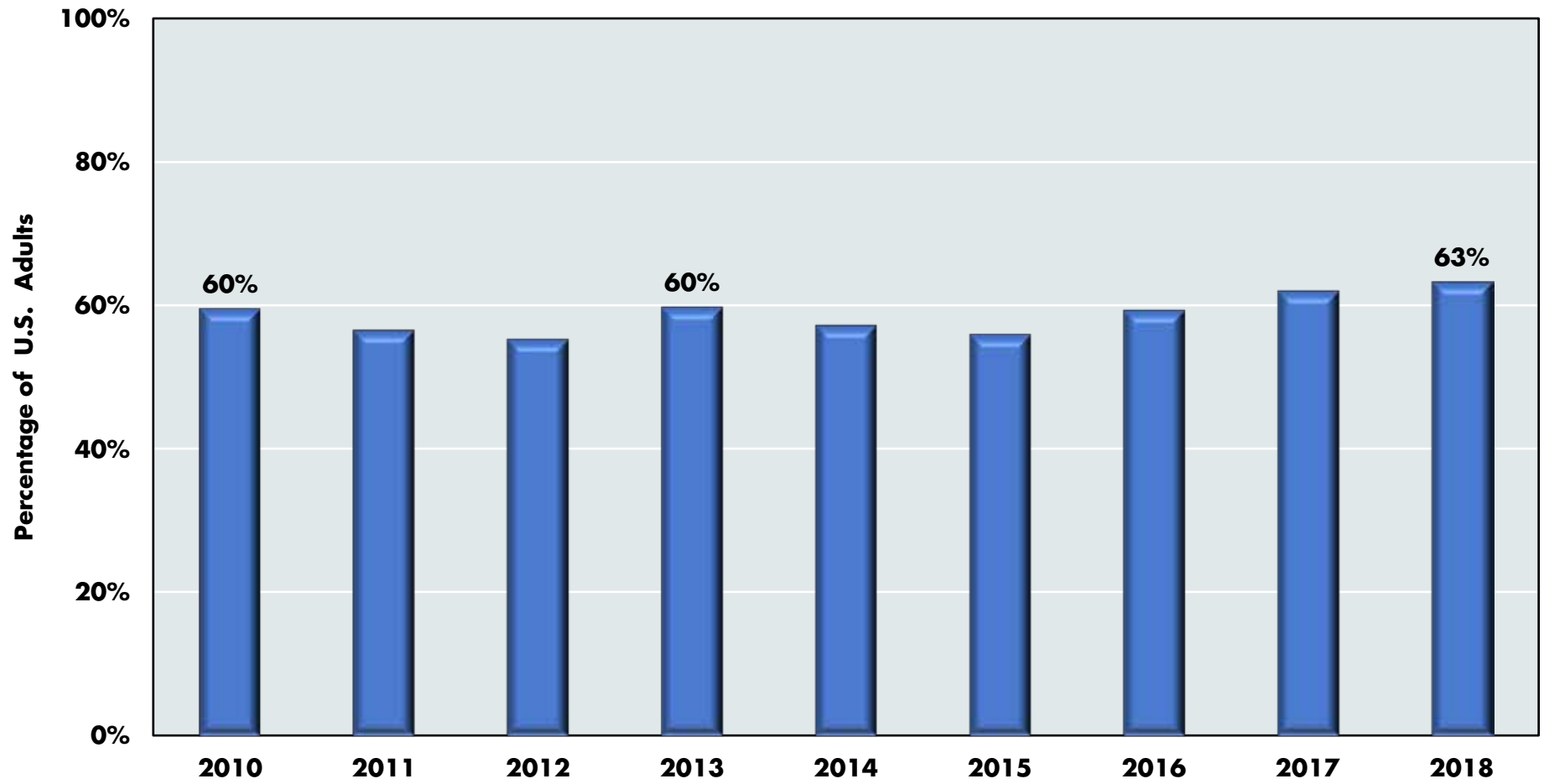
Most people feel nervous about starting a new job. Kate Brinn, president of Bon Secours Maryview Medical Center in Portsmouth and Harbour View Medical Campus in Suffolk, recalls feeling anxious about this experience. “I was nervous about making sure I created the time to get to know people. I think that is the hardest part of starting any new job. In this new position, there are over a thousand people on our staff, and it’s my responsibility to get to know them and what they need so I can help us all grow together.” Then, just 12 days after Brinn started her new job, the governor, on March 12, declared a state of emergency due to the COVID-19 pandemic. “There were suddenly so many more things to think about. I was already so emotionally invested in all of the people, both associates and patients, in our hospital that I wasn’t sleeping well. Fortunately, with national guidance and our amazing team, we quickly put together an emergency operation plan that made sense for our community. Knowing we had a plan in place that we could communicate and implement, built confidence that we could manage this, and I think it helped others too.”

¹³ <https://adaa.org/low-income-communities>.

¹⁴ <https://www.apa.org/news/press/releases/stress/2014/stress-report.pdf>.

GRAPH 1

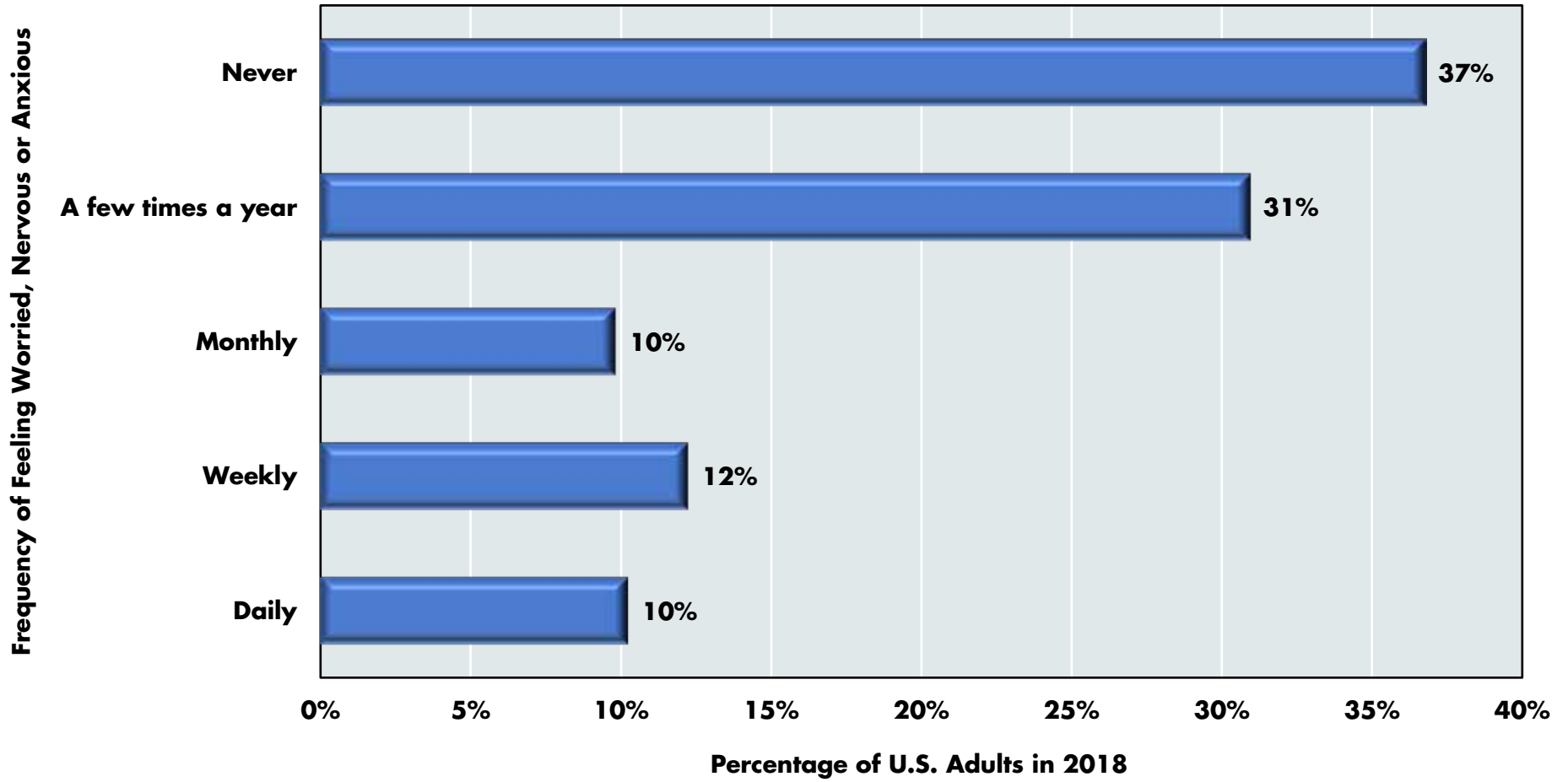
PERCENTAGE OF U.S. ADULTS WHO FEEL WORRIED, NERVOUS OR ANXIOUS, 2010-2018



Source: IPUMS Health Surveys: National Health Interview Survey, <https://nhis.ipums.org/>

GRAPH 2

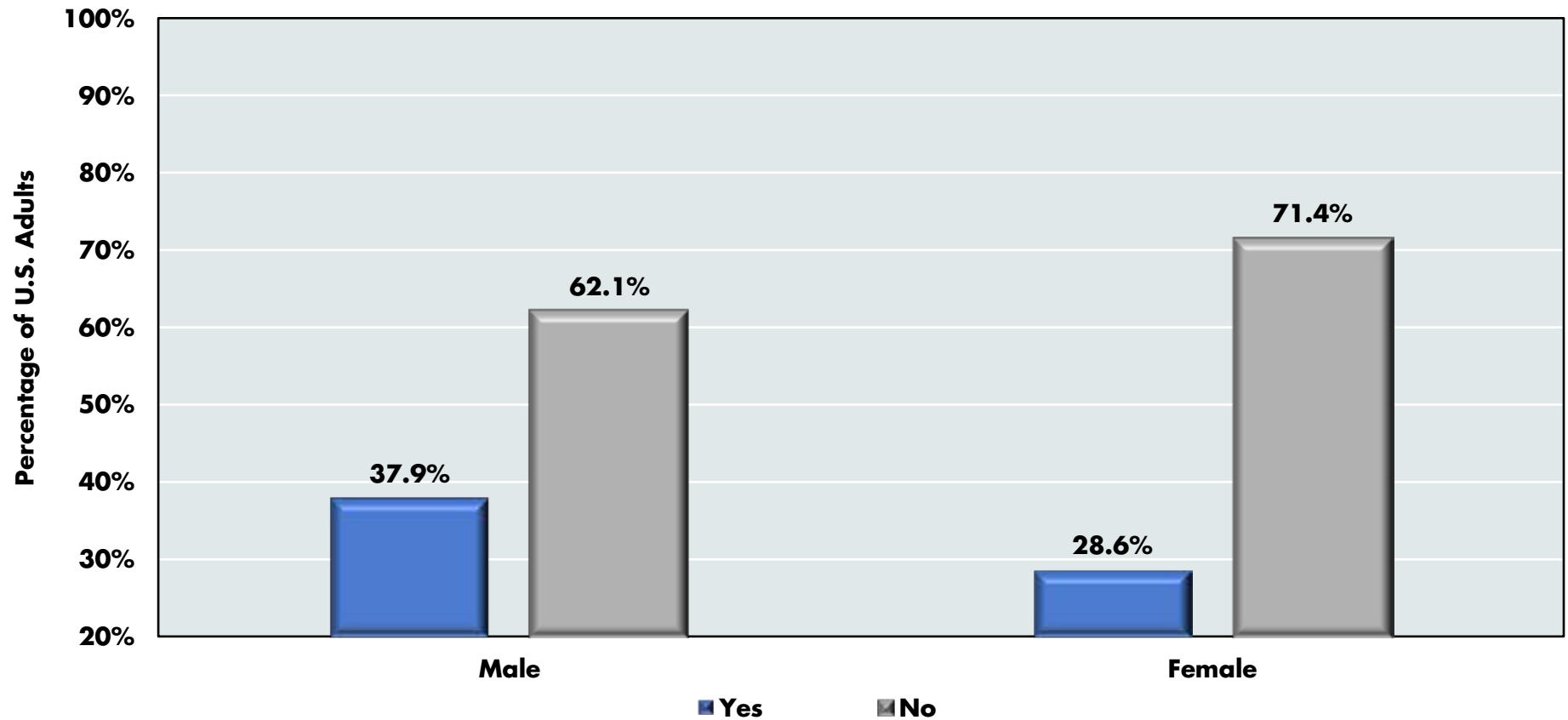
PERCENTAGE OF HOW OFTEN U.S. ADULTS FELT WORRIED, NERVOUS OR ANXIOUS IN 2018



Source: IPUMS Health Surveys: National Health Interview Survey, <https://nhis.ipums.org/>

GRAPH 3

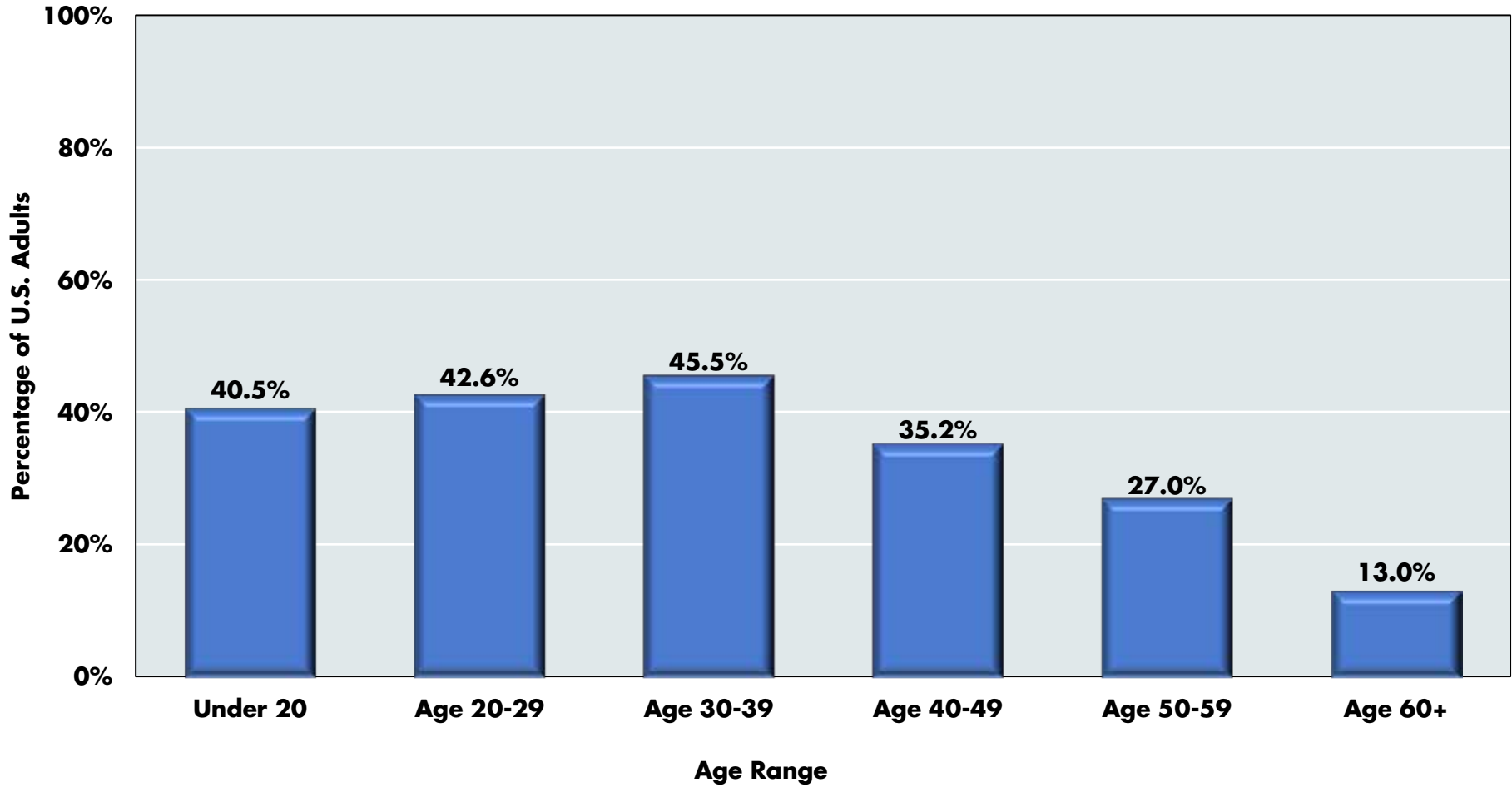
**PERCENT OF ADULTS REPORTING FEELINGS OF WORRY CAUSED BY AMOUNT AND TYPE OF WORK:
UNITED STATES, 2010**



Source: IPUMS Health Surveys: National Health Interview Survey, <https://nhis.ipums.org/>

GRAPH 4

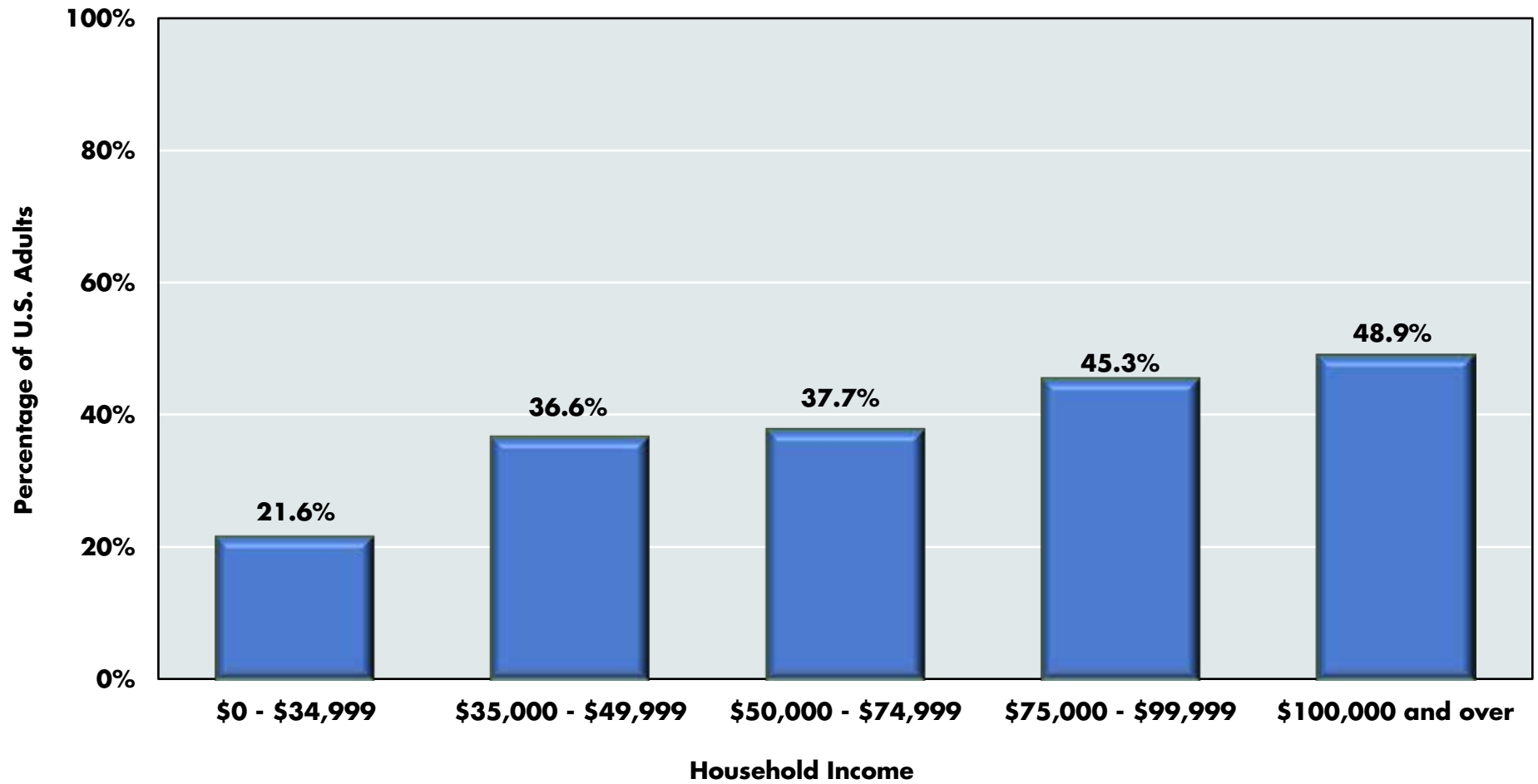
**PERCENT OF ADULTS REPORTING FEELINGS OF WORRY CAUSED BY AMOUNT AND TYPE OF WORK BY AGE GROUP:
UNITED STATES, 2010**



Source: IPUMS Health Surveys: National Health Interview Survey, <https://nhis.ipums.org/>

GRAPH 5

**PERCENT OF ADULTS REPORTING FEELINGS OF WORRY CAUSED BY AMOUNT AND TYPE OF WORK BY INCOME:
UNITED STATES, 2010**



Source: IPUMS Health Surveys: National Health Interview Survey, <https://nhis.ipums.org/>

Race and Anxiety In The Workplace

Workplace stress and anxiety are undoubtedly affected by the environment in which work takes place. Black and African American men, for example, are more likely than white or Hispanic men to work in low-complexity jobs that include exposure to stressors, such as shift work, a lack of health insurance, longer hours and job volatility. Individuals in a work environment characterized by a combination of high demands (tasks, hours, risks) and low control (low autonomy, flexibility, discretion) have a 34% higher risk of mortality than individuals in a low-demand, high-control environment.¹⁵ In Graph 6, we present estimates from research in 2016 regarding the expected loss in life expectancy due to workplace conditions for individuals with a high school education or less. Blacks, African Americans and Hispanics have statistically significantly higher estimated losses than whites with comparable education.¹⁶

One potential remedy for the disparities displayed in Graph 6 is education. Ideally, as education increased, individuals would transition from high-demand/low-control work to low-demand/high-control work. In other words, education would empower individuals and, as a result, lower workplace anxiety and stress.

Yet, research suggests that while education can reduce disparities, it also does not entirely eliminate them. Racial differences persist even after controlling for differences in socio-economic characteristics. In other words, education alone cannot address the systemic problems that contributed to the disparities in the first place.

The American Psychological Association's 2017 report, *Stress and Health Disparities*, noted that there are not only economic disparities at work, but also network disparities.¹⁷ Job security, stability and nonwage compensation have declined for low-wage earners. The report notes that from 1982 to 1996, among individuals in the 10th percentile of income or lower, there was a 75% decline in nonwage compensation (benefits, including health insurance). With lower socioeconomic-status individuals relying more on familial connections than business connections, the ability to move up the economic ladder is diminished, increasing economic stress. The APA report notes: "Prejudice and discrimination affect the ability to accumulate social, personal, educational, and material capital." Without this capital, lower-income and minority households are less able to adapt to changes in the workplace and are left further behind.

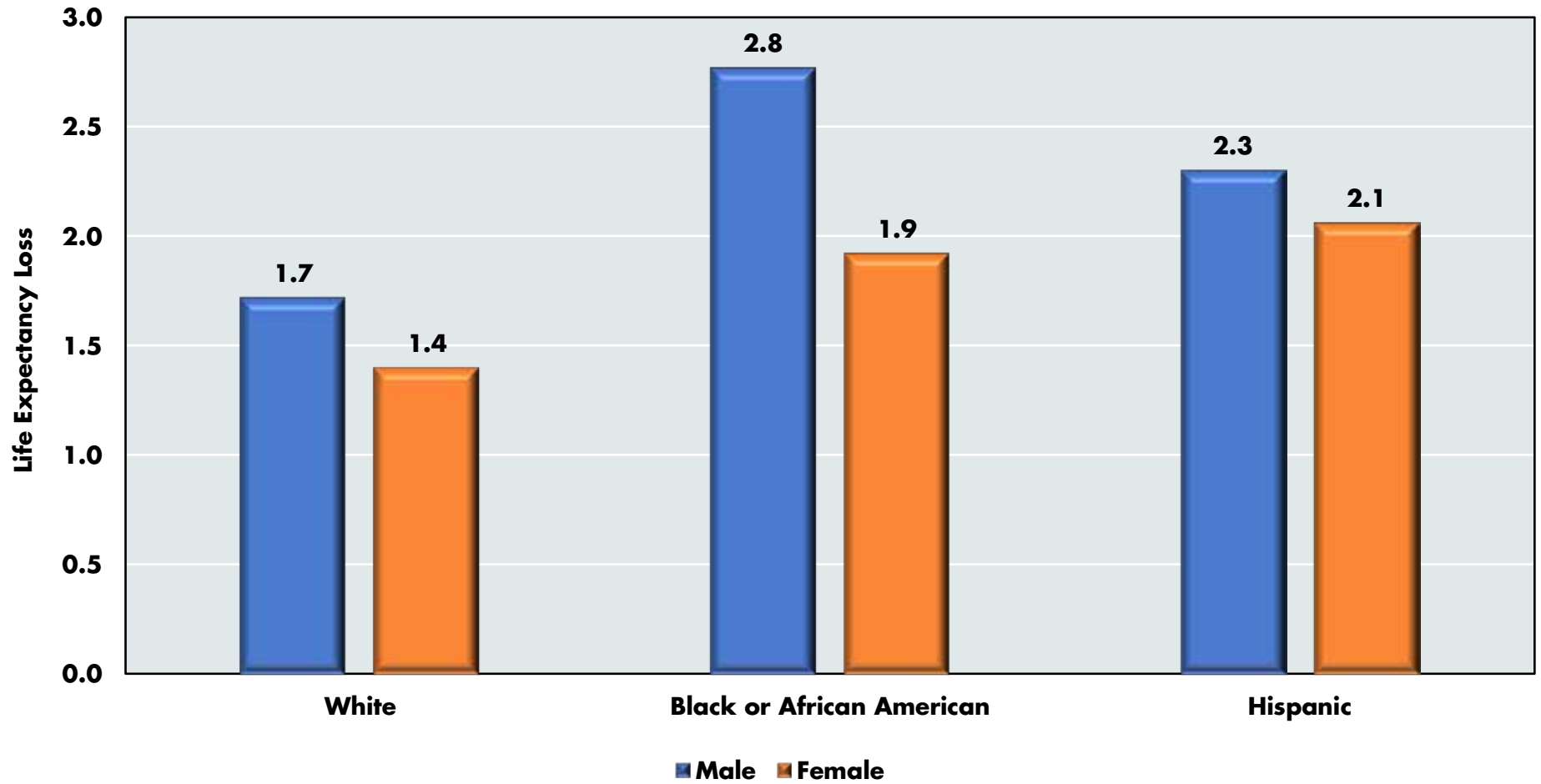
¹⁵ E. Gonzalez-Mulé and B. Cockburn, (2017), "Worked to Death: The Relationships of Job Demands and Job Control with Mortality," *Personnel Psychology*, 70: 73-112. doi:10.1111/peps.12206.

¹⁶ J. Goh, J. Pfeffer and S. Zenios, "Exposure to harmful workplace practices could account for inequality in life spans across different demographic groups," *Health Affairs*, 2015;34(10):1761-1768. 10.1377/hlthaff.2015.002210.1377/hlthaff.2015.0022.

¹⁷ <https://www.apa.org/pi/health-disparities/resources/stress-report.pdf>.

GRAPH 6

ESTIMATED LOSS IN LIFE EXPECTANCY DUE TO WORKPLACE CONDITIONS, HIGH SCHOOL OR LESS EDUCATION



Source: J. Goh, J. Pfeffer and S. Zenios (2015)

Worry And Anxiety About Work During A Crisis

As we saw during the early months of 2020, a public health crisis can quickly place many workers in unfamiliar situations. For some employees, working remotely for the first time while juggling family demands increased anxiety. Others found themselves out of work and needing to file for unemployment benefits. These drastic shifts in working arrangements caused half of adults in the country to believe that the COVID-19 crisis would negatively impact their work or workplace.¹⁸ It is not surprising that a Pew Research Study found that nearly twice as many U.S. adults reported feeling anxious and worried in March 2020 than during the same period in 2018.¹⁹ Nor is it surprising that individuals who experienced job loss or a work reduction during COVID-19 reported more feelings of anxiety than those whose job status did not change.²⁰

Worry and concern about health during a global pandemic seems natural, but just as the national data found there were many sources of worry, we argue that the crisis caused a sizable increase in anxiety and worry. The specific causes of worry were likely different as individuals throughout the labor force faced this crisis. For Virginians in the hospitality and service industries,²¹ anxiety likely arose out of concerns about future income, paying bills without consistent income and how to file for unemployment benefits. For Virginians who maintained employment, a previous worry about a possible confrontation with a co-worker or boss was less likely to occur as employees changed work environments. Instead, new worries appeared in our lives, such as how to complete work at home while attending to other demands for attention (like children) or feeling anxious about completing work tasks without all of the traditional means of support just a few steps away. The old worries didn't go away; they just took a back seat to new concerns as major adjustments to work were made.

18 <https://news.gallup.com/poll/295508/half-workers-expect-covid-harm-workplace.aspx>.

19 <https://www.pewresearch.org/fact-tank/2020/03/30/people-financially-affected-by-covid-19-outbreak-are-experiencing-more-psychological-distress-than-others/>.

20 <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/returning-to-resilience-the-impact-of-covid-19-on-behavioral-health#>.

21 <https://www.pilotonline.com/business/vp-bz-unemployment-claims-20200326-5lgyljj4ybaivc5sesethrntm-story.html>.

It is also important to recognize that as work changed from on-site to remote (or off-site) work, a major concern among employers was the potential for employees to experience increased loneliness due to working at home.²² In a time of social distancing and stay-at-home orders, many of us miss human contact. Virtual meetings and phone calls don't provide the same stimuli that we need, such as a high-five, hug or handshake.²³

Other critical moments in recent history also have impacted workplace well-being and employee mental health. For example, more than three-quarters of U.S. adults have experienced some stress caused by the possibility of a mass shooting.²⁴ The aftermath of these horrific events can be catastrophic to individuals and costly to organizations too. At least 450 city of Virginia Beach employees filed workers' compensation claims after the 2019 mass shooting, mostly for mental health reasons.²⁵ Whether it is feeling fearful about a virus, worried about a mass shooting or anxious about some other major event, it is normal for people to feel this way. A crisis causes us to react and change, and those changes can be difficult. According to the World Health Organization, work can be good for mental health. We agree with this belief, perhaps especially during or after a crisis. Work can create a sense of purpose and meaning and can force us to create routines and return to a sense of normalcy. A positive work environment with supportive co-workers and supervisors can help alleviate feelings of worry and anxiety for some people, and we encourage everyone to be the supportive colleague that you would want to have during a time of change.

22 <https://www.gallup.com/workplace/268076/manage-loneliness-isolation-remote-workers.aspx>.

23 <https://www.cnn.com/2020/04/02/health/coronavirus-human-contact-wellness-intl/index.html>.

24 <https://www.apa.org/news/press/releases/2019/08/fear-mass-shooting>.

25 <https://www.pilotonline.com/news/virginia-beach-mass-shooting/vp-nw-ptsd-workers-compensation-20191208-prczwn6wgzcs7jlywat4a3gwwm-story.html>.

The Cost Of Worry In Hampton Roads

How much do worry and anxiety cost? In 2016, researchers estimated that the cost of workplace anxiety and worry to the U.S. economy was \$1,212 per worker annually, or \$1,314 in 2019 dollars.²⁶ Using data on individual employment, we estimate that worry and anxiety in the workplace cost the region approximately \$1.1 billion in 2019. In other words, if Hampton Roads was worry- and anxiety-free in the workplace, its economic activity may have increased by up to 1% in 2019.

Worry and anxiety in the workplace are not cheap. These conditions reduce productivity, which, in turn, reduces profitability. If employees are worried or anxious about their jobs, their focus is elsewhere; mistakes accrue and business suffers. Worry and anxiety also have physical manifestations. Employees may call in sick or seek medical attention. These behaviors may drive up insurance premiums. Businesses cannot simply hope that worry and anxiety go well; they need to be proactive in addressing employee well-being and mental health.

**TABLE 1
ESTIMATED COST OF WORRY AND ANXIETY
IN HAMPTON ROADS, 2020**

Locality	2019 Employment	2019 Estimated Cost of Worry and Anxiety
Camden County	4,481	\$5,892,515
Currituck County	13,609	\$17,895,835
Gates County	5,145	\$6,765,675
Gloucester County	19,198	\$25,245,370
Isle of Wight County	19,017	\$25,007,355
James City County	35,860	\$47,155,900
Mathews County	4,048	\$5,323,120
Southampton County	8,895	\$11,696,925
York County	32,110	\$42,224,650
Chesapeake	119,957	\$157,743,455
Franklin	3,453	\$4,540,695
Hampton	62,353	\$81,994,195
Newport News	86,310	\$113,497,650
Norfolk	108,487	\$142,660,405
Poquoson	6,271	\$8,246,365
Portsmouth	42,831	\$56,322,765
Suffolk	43,564	\$57,286,660
Virginia Beach	228,266	\$300,169,790
Williamsburg	6,475	\$8,514,625
Hampton Roads	833,499	\$1,096,051,185

Sources: Bureau of Labor Statistics, Current Population Survey; the Dragas Center for Economic Analysis and Policy, Old Dominion University; and J. Goh, J. Pfeffer and S. Zenios (2015). Employment is annual average individual employment. Consumer Price Index is used to obtain 2019 dollars.

²⁶ J. Hassard, K.R. Teoh, G. Visockaite, P. Dewe and T. Cox, (2018), "The cost of work-related stress to society: A systematic review," *Journal of Occupational Health Psychology*, 23, 1-17, doi: 10.1037/ocp0000069. Consumer Price Index from the Bureau of Labor Statistics.

What Can You Do If You Feel Worried Or Anxious?

Matt Judah is a licensed clinical psychologist specializing in anxiety and a faculty member of the Virginia Consortium Program in Clinical Psychology, a collaborative program offered by Eastern Virginia Medical School, Norfolk State University and Old Dominion University. He suggests that you first must understand what anxiety is. "Anxiety is normal and, believe it or not, it is there to help you," he says. "Anxiety is an alarm system. It prompts you to put your seatbelt on, to look both ways before crossing the street and to get work done on time. Like any alarm, anxiety does not feel comfortable. It needs to be uncomfortable to motivate us to do what we need to do. Understanding that anxiety is normal, helpful and that it needs to feel uncomfortable can help us accept anxiety. Nonacceptance of anxiety can lead to frustration and anxiety about feeling anxious. That type of anxiety is not helpful, and it can lead to high levels of anxiety that are difficult to tolerate." However, if you find yourself consistently stressed, worried or anxious, seek help from a mental health professional. Although many feel alone (especially during COVID-19 and other times of crisis), the fact is that over 3% of the U.S. adult population is diagnosed with generalized anxiety disorder.²⁷ This percentage likely underestimates the actual number of Americans that have an anxiety disorder.

It is important to find ways to cope with anxiety. "Anxiety thrives off of time to sit and think. Being active can help," says Judah.²⁸ Exercising, playing games and learning a new skill are all great ways to stay active. Listening to music or podcasts keeps your mind alert during activities like driving or doing chores, leaving less time for worry. Another common recommendation is to start a "worry journal." This is a technique that is part of cognitive behavioral therapy and is one of the more effective and low-cost options for reducing anxiety.

Keeping a worry journal can be as simple as taking five to 10 minutes each day to write down all the things that are causing you to feel worried. Research continues to show that this can help alleviate obsessive thoughts. This works similarly to setting weekly goals or making a to-do list, which can improve thoughts of control over one's time and reduce stress and tension from feeling overwhelmed by work.²⁹



27 <https://adaa.org/understanding-anxiety/generalized-anxiety-disorder-gad>.
28 https://odu.edu/news/2020/4/q_a_with_matt_judah.

29 T.H. Macan, (1994), "Time management: Test of a process model," *Journal of Applied Psychology*, 79, 381-391.

Final Thoughts

Work is good for mental health but a negative working environment can lead to physical and mental health problems.

– World Health Organization³⁰

It is normal to feel worried and anxious at times. In small doses, these feelings can provide temporary boosts to motivation and productivity. However, prolonged worry, stress and/or anxiety are cause for concern. A considerable number of employees spend time at work worrying, and many adults worry specifically about work, even when they aren't physically in the work environment. This creates a huge cost to organizations and the economy overall, both in terms of lost productivity at work and higher health care costs. Based on the past decade of national data, this would mean that nearly 100,000 adults in Hampton Roads are diagnosed with an anxiety disorder and over 300,000 workers in our region feel anxious, nervous or worried at least once a month.

In addition to individuals seeking out help, we believe that organizations can play an important role in facilitating a broader conversation and providing resources for individuals to deal with worry and anxiety. Companies can make changes to health care policies to elicit a positive response. Small changes in corporate culture can help too. Leaders can take an active role by talking about their own experiences, asking questions and listening to employees.

A phenomenon that likely isn't new but is entering the public conversation these days is that a number of employees, including highly productive employees who like their jobs, are experiencing a feeling called the "Sunday scaries" or the "Sunday blues."³¹ This is a feeling of worry and anxiety that happens at the end of the weekend as a person begins to think about (and worry about) the workweek ahead. Overall, given how prevalent these feelings of worry and anxiety are among the U.S. adult population, it's time we explore them a little more within ourselves and talk about them a little more with loved ones, friends and co-workers.

³⁰ https://www.who.int/mental_health/in_the_workplace/en/.

³¹ <https://www.theatlantic.com/family/archive/2020/02/sunday-scaries-anxiety-workweek/606289/>.



Food Insecurity In Hampton Roads



FOOD INSECURITY IN HAMPTON ROADS

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.

In 2018, more than 1 in 10 households in Hampton Roads experienced “food insecurity,” according to the U.S. Department of Agriculture (USDA).¹ This meant that more than 180,000 people in our region did not have access to adequate food and in many cases did not know from whence their next meal was coming. Food insecurity negatively influences a host of outcomes. For workers, it lowers productivity. For students, it lowers academic performance and for young children, it leads to overall poor health. This is a surprising, perhaps astonishing, circumstance given that our region’s economy was growing in 2018, and the regional rate of unemployment fell from 8.2% in January 2010 to only 3.2% in December 2018. Yet food insecurity persisted.

Food insecurity is highly sensitive to the business cycle. Graph 1 reveals that as economic conditions improve, food insecurity declines. As the national unemployment rate declined from an average of 14.5% in 2010 to 3.9% in 2018, food insecurity declined from 14.5% to 11.1% of households. Yet, even though a record number of Americans were working, food insecurity remained persistent for more than 1 in 10 households.

Improving prosperity, by itself, is insufficient to eliminate food insecurity. Food insecurity is higher among single-parent families, families with more children and among the elderly than the general population. Over 44% of disabled households were food insecure.² Food insecurity was higher on average for Black and African American and Hispanic households than white or Asian households. There is, unfortunately, no single policy or remedy for food insecurity.

Because food insecurity has multiple causes that ebb and flow, it can be episodic for individual households. A person may be employed this year but was not last year. A husband leaves a household for six months but then returns. Homegrown garden vegetables are available in the summer and fall but not in the winter. It is also important we note that when food insecurity data are collected, it is done on the basis of households. This means that many homeless families and individuals are excluded. Consequently, the USDA’s published food insecurity data are biased downward and underestimate the true extent of food insecurity in the United States.

The COVID-19 pandemic and resulting recession clearly exacerbated food insecurity in Hampton Roads, Virginia and across the United States. Food banks reported record levels of need. The lines of cars snaking around parking lots in hopes of receiving food served as a reminder of how food insecurity can strike any household due to a job loss or medical crisis.

In this chapter, we examine food insecurity in Hampton Roads. We discuss how public programs and regional food banks are working to address this problem in the region. We conclude by asking what can be done to alleviate food insecurity in Hampton Roads.

¹ Each month, the U.S. Census Bureau conducts the Current Population Survey for the Bureau of Labor Statistics. 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. Once a year, the Census Bureau asks about 130 million households to complete a supplemental survey about food security, food expenditures and the use of food and nutritional assistance programs. The U.S. Department of Agriculture’s annual reports on household food security are derived from responses to the supplemental survey.

² Computed using data from the U.S. Department of Agriculture, Economic Research Service, Current Population Survey Food Security Supplement data, 2018, www.ers.usda.gov/data-products/food-security-inthe-united-states.

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 also create some confusion. To mitigate the confusion, in 2006, the USDA changed its definition to make an explicit distinction between food insecurity and hunger.

Every individual 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.” 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.” Both of these definitions relate 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.

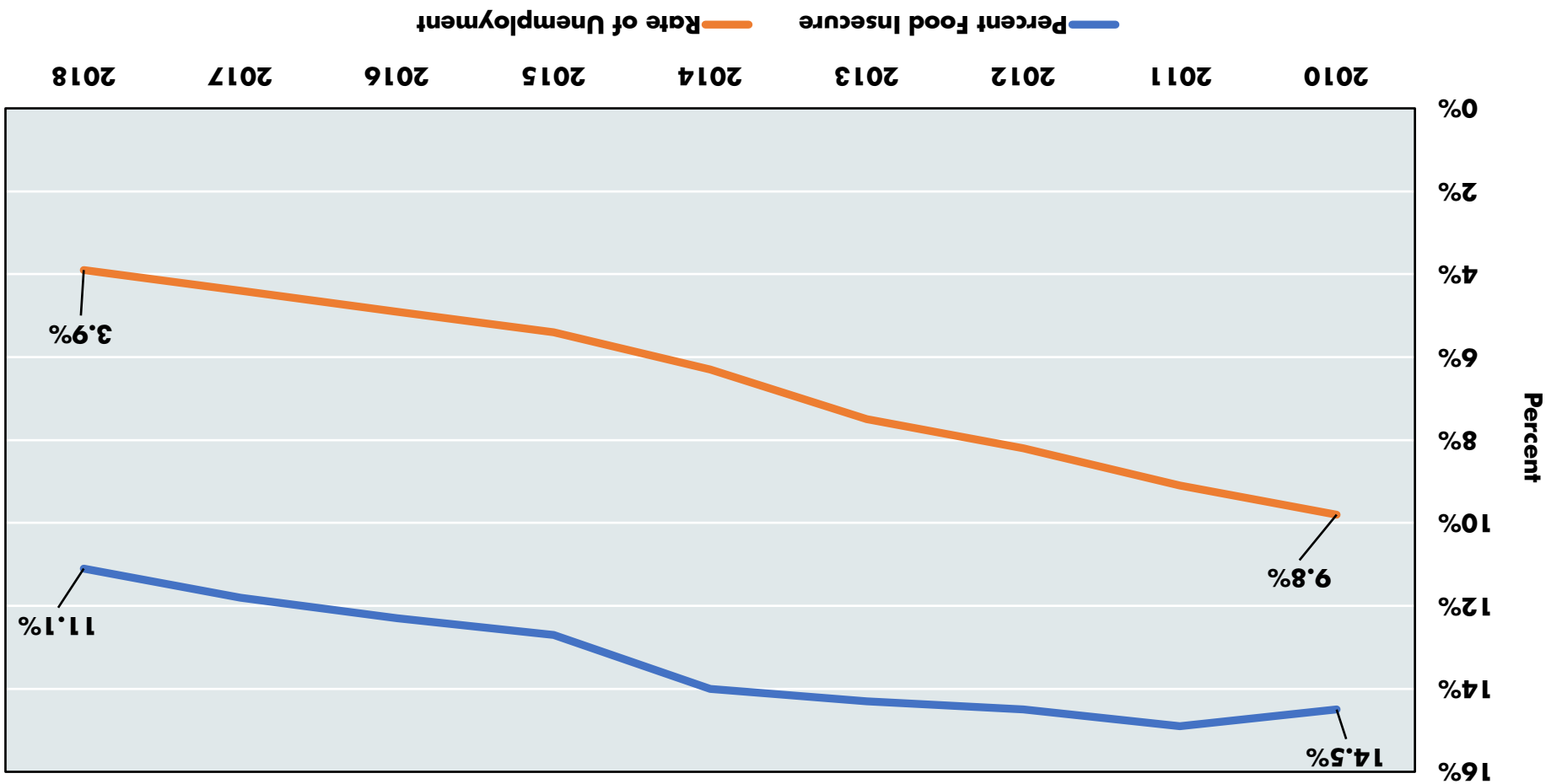
The USDA works with the U.S. Census Bureau to measure food insecurity. Once a year, the Census Bureau asks the households in its monthly Current Population Survey to complete a supplemental survey about food security, food expenditures and the use of food and nutritional assistance programs. In 2018, for example, the supplemental survey covered 37,300 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.

Michael* has been a client of the Foodbank of Southeastern Virginia and the Eastern Shore. Like many food-insecure Americans, Michael has been a member of the “working poor.” He is a single parent and food is one of his family’s largest expenses, especially in the summer when his children do not have access to school breakfast and lunch programs. He has worked multiple jobs to raise his family’s income and well-being, but his industrious behavior sharply reduced the Supplemental Nutrition Assistance Program (SNAP) and other benefits he receives because his income exceeds program rules. This underlines a difficulty most income-based social safety net programs encounter – finding the right formula to diminish benefits when recipients earn income, but in a way that does not discourage recipients from work. SNAP has yet to devise income-based rules for support that do not discourage some recipients from gainful employment.³



³ <https://foodbankonline.org/wp-content/uploads/2019/10/Foodbank-Public-Report-9-26-19-online.pdf>. (*name changed)

Sources: Alicia Coleman-Jensen et al., "Household Food Security in the United States in 2018," U.S. Department of Agriculture and the Bureau of Labor Statistics



GRAPH 1
FOOD INSECURITY AND THE HEADLINE UNEMPLOYMENT RATE:
UNITED STATES, 2010-2018

Food Insecurity In Hampton Roads

The cities in Hampton Roads tend to exhibit the highest rates of food insecurity, led by Franklin at 14.6% in 2018 (Table 1). Food insecurity is highly correlated with median household income, the unemployment rate and, consequently, the poverty rate. Cities with higher concentrations of poverty have higher rates of food insecurity. According to the U.S. Census, for example, the poverty rate in Chesapeake is 8.5% compared to 19.7% in Norfolk. It should be no surprise that food insecurity is higher in Norfolk (13.9%) than Chesapeake (8.5%). Once again, this emphasizes the primarily economic roots of food insecurity.

Food insecurity rates for children always exceed those for the populations as a whole and typically are about 1.5 times larger in a typical jurisdiction. Why? Because the addition of individuals to a household frequently strains the resources of that household. Further, if a single parent leads the household, this complicates the problem. Numerically, children are the greatest victims of food insecurity in the United States.

The roots of food insecurity are no mystery. Adverse economic conditions and poverty are usually the major contributors. Food insecurity rises side by side with unemployment rates. That said, there are other factors that contribute to food insecurity. Several recent State of the Region reports have documented the fall in labor force participation rates – both nationally and in Hampton Roads. Some portion of this decline can be ascribed to changing societal attitudes toward work. In some quarters, it has become socially acceptable for an individual not to be fully employed even when that person is of prime working age. The consequences of this are not all negative, but one unfortunate outcome is family economic distress that leads to food insecurity for individuals (often children) who did not make this decision for themselves.



TABLE 1

FOOD INSECURITY IN HAMPTON ROADS, 2018

Locality	Number of Food-Insecure Individuals	Food Insecurity Rate	Number of Food-Insecure Children	Food Insecurity Rate for Children
Camden County	1,220	11.7%	460	18.6%
Chesapeake	20,100	8.5%	7,040	12.2%
Currituck County	2,930	11.4%	930	16.3%
Franklin	1,200	14.6%	350	17.6%
Gates County	1,640	14.2%	520	21.5%
Gloucester County	3,400	9.1%	980	13.1%
Hampton	17,590	13.0%	5,160	17.9%
Isle of Wight County	3,420	9.4%	1,030	13.4%
James City County	5,860	7.9%	1,700	11.2%
Mathews County	820	9.3%	190	14.6%
Newport News	23,800	13.2%	7,030	16.8%
Norfolk	34,190	13.9%	8,910	18.3%
Poquoson	740	6.2%	240	8.9%
Portsmouth	13,100	13.7%	4,340	19.3%
Southampton County	1,800	10.0%	500	14.5%
Suffolk	8,760	9.8%	2,950	13.4%
Virginia Beach	36,740	8.2%	10,770	10.7%
Williamsburg	1,760	11.9%	210	12.8%
York County	4,750	7.0%	1,490	9.2%
Hampton Roads	183,820	10.7%	54,800	14.8%

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

Federal Government Responses To Food Insecurity

The U.S. government has responded to emerging food insecurity and hunger problems in a variety of ways, but three programs stand out: (1) SNAP, the Supplemental Nutrition Assistance Program, often referred to as “food stamps”; (2) WIC, the Special Supplemental Nutrition Program for Women, Infants, and Children; and (3) NSLP, the National School Lunch Program. We will consider each of these in turn.

How large are these programs? If we measure size by dollars spent, then SNAP easily is the largest at approximately \$57 billion annually.⁴ As Graph 2 indicates, SNAP accounts for about two-thirds of all federal spending directed at food insecurity. SNAP, WIC and NSLP together account for 87.4% of federal spending in this arena.

Supplemental Nutrition Assistance Program (SNAP)

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 program has moved from its early food stamp days, when eligible households received a book of stamps, to an EBT (Electronic Benefits 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 fiscal year 2020, 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.⁵

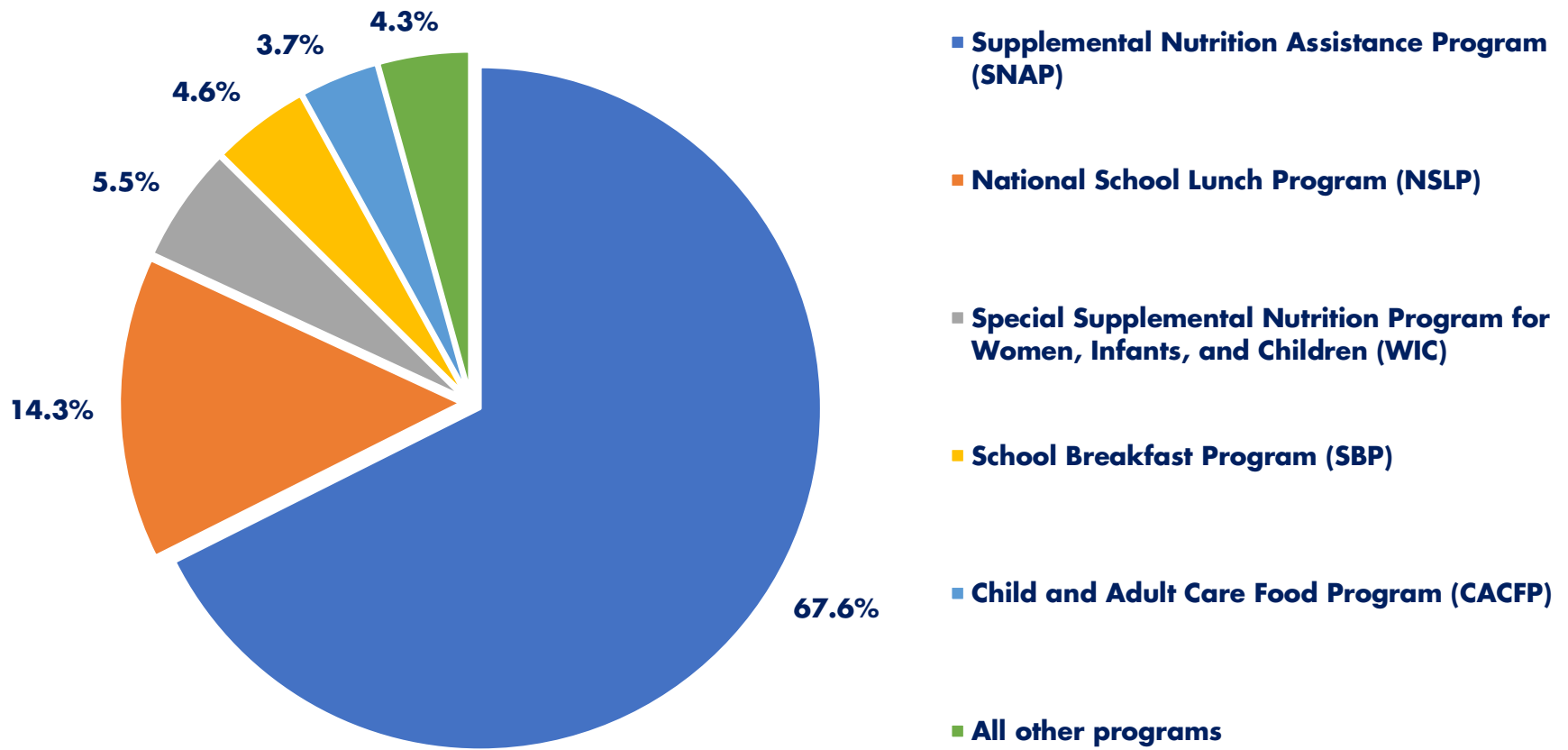
In 2019, an average of 1 in 10 persons in the Virginia portion of Hampton Roads received SNAP benefits monthly (Table 2). SNAP participation rates varied considerably, from a low of 2.4% of the population in Poquoson to a high of 27.2% in Franklin. Residents received almost \$260 million in SNAP benefits in 2019, a figure that is certain to rise with the COVID-19 recession in 2020.

⁴ Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/BRVA51M647NCEN>.

⁵ <https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-and-benefits>.

GRAPH 2

FEDERAL SPENDING TO COMBAT FOOD INSECURITY, FY 2018



Source: U.S. Department of Agriculture, Economic Research Service, www.ers.usda.gov/data-products/food-security-in-the-united-states

TABLE 2

**AVERAGE MONTHLY SNAP PARTICIPATION AND BENEFITS:
HAMPTON ROADS, 2019**

	2019 Population	Average Monthly SNAP Participation	Average Monthly SNAP Benefits Paid	Average SNAP Benefit Per Person	Average Monthly SNAP Participation Rate
Chesapeake	244,835	18,093	\$2,256,606	\$124.72	7.4%
Franklin	7,967	2,170	\$274,031	\$126.30	27.2%
Gloucester County	37,348	3,072	\$366,111	\$119.20	8.2%
Hampton	134,510	18,331	\$2,259,112	\$123.24	13.6%
Isle of Wight County	37,109	2,880	\$331,854	\$115.22	7.8%
James City County	76,523	3,541	\$422,516	\$119.33	4.6%
Mathews County	8,834	671	\$73,366	\$109.42	7.6%
Newport News	179,225	28,823	\$3,621,462	\$125.64	16.1%
Norfolk	242,742	35,428	\$4,395,990	\$124.08	14.6%
Poquoson	12,271	300	\$38,581	\$128.71	2.4%
Portsmouth	94,398	19,778	\$2,572,358	\$130.06	21.0%
Southampton County	17,631	2,199	\$251,909	\$114.58	12.5%
Suffolk	92,108	10,221	\$1,204,987	\$117.90	11.1%
Virginia Beach	449,974	26,063	\$3,203,564	\$122.91	5.8%
Williamsburg	14,954	1,049	\$131,247	\$125.10	7.0%
York County	68,280	2,101	\$250,399	\$119.21	3.1%
Hampton Roads	1,718,709	174,717	\$21,654,093	\$123.94	10.2%

Sources: 2019 Population estimates from the U.S. Census Bureau and SNAP participation and benefits data from the Virginia Department of Social Services

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)

The WIC program 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 are deemed income-eligible based on participation in other federal programs. Furthermore, WIC participants must demonstrate nutritional risk (for example, anemia, weight loss, etc.) 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, including a wide range of fruits, vegetables and whole grains, is 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 certain items, such as fruits and vegetables, there is a maximum dollar value that the program covers. WIC covers \$11 worth of fruit and vegetables a month for pregnant women.⁶

⁶ <https://www.fns.usda.gov/wic/wic-food-packages>.

National School Lunch Program (NSLP)

The USDA partners with state agencies to provide the NSLP. The nation's second-largest food and nutrition assistance program, it affords every student the opportunity to receive a healthy lunch, serving on average 30 million children a day, with over 90% of all schools participating. Children are eligible for either a free or reduced-price lunch based on their household income relative to the national poverty line. In addition to receiving meals during the school year, students in low-income areas are able to eat meals during the summer from the Summer Food Service Program (SFSP), also known as the Summer Meals Program. Also administered by the USDA, this program is federally funded and reimburses providers that serve meals to children and teens during the summer.⁷

In the 2019–2020 school year, 47.1% of students in Hampton Roads schools were eligible for free or reduced-price meals at school (Table 3). In York County, about 1 in 4 students were eligible for free or reduced-priced meals. In Newport News, Norfolk and Portsmouth, approximately 3 in 4 students were eligible. In the city of Franklin, every enrolled student was eligible. The closure of schools due to the COVID-19 pandemic created a new model of food distribution to students in March 2020. To combat this sudden bout of food insecurity, public school systems across the region offered “grab and go” breakfast, lunch and, at selected schools, dinner on weekdays and weekends to students at a variety of school locations, as well as some mobile sites in the lowest-income areas. In accordance with the Families First Coronavirus Response Act of 2020, emergency waivers were granted allowing parents and/or guardians to pick up meals for their children from school, without the student needing to be present. The Virginia Department of Education also implemented the Pandemic Electronic Benefit Transfer (P-EBT), a temporary food benefit offered to families whose children would have received free or reduced-price meals had schools not been closed. The P-EBT benefits are issued in a lump sum and are available wherever SNAP benefits are accepted.

⁷ U.S. Department of Agriculture, Food and Nutrition Service, SFSP, 2020.

TABLE 3**STUDENT NUTRITION PROGRAM MEMBERSHIP AND FREE/REDUCED-PRICE MEALS FOR ELIGIBLE STUDENTS:
HAMPTON ROADS PUBLIC SCHOOLS, 2019-2020**

School District	Student Nutritional Program Membership	Free Meal Eligible Students	Reduced Price Eligible Students	Total Free and Reduced Price Students	Percentage of Students Eligible for Free or Reduced Price Meals
Chesapeake	40,423	14,164	2,114	16,278	40.3%
Franklin	1,090	1,090	0	1,090	100.0%
Gloucester County	5,212	1,688	399	2,087	40.0%
Hampton	19,726	11,230	729	11,959	60.6%
Isle of Wight County	5,664	1,751	212	1,963	34.7%
Mathews County	996	376	78	454	45.6%
Newport News	28,468	21,763	0	21,763	76.5%
Norfolk	30,302	20,960	1,248	22,208	73.3%
Poquoson	2,124	299	44	343	16.2%
Portsmouth	14,077	10,461	386	10,847	77.1%
Southampton County	2,750	1,128	99	1,227	44.6%
Suffolk	14,377	6,523	615	7,138	49.7%
Virginia Beach	68,772	21,513	5,675	27,188	39.5%
Williamsburg-James City County	11,863	3,293	614	3,907	32.9%
York County	13,151	2,052	990	3,042	23.1%
Total	258,995	118,291	13,203	131,494	47.1%

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

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. An eclectic combination of churches, mosques, synagogues, halfway houses, emergency shelters and other private organizations feeds the needy. Among the most active are Union Mission Ministries, The Salvation Army and Samaritan House. In Newport News, for example, Menchville House, Peninsula Rescue Mission and PORT Shelter feed and provide refuge for many dozens of individuals on a continuing basis.

Two of the largest organizations in Hampton Roads are the Foodbank of Southeastern Virginia and the Eastern Shore (founded in 1981) and the Virginia Peninsula Foodbank (established in 1986). The service areas of these two agencies divide up Hampton Roads roughly between the north and south sides of the region.⁸

These organizations partner with local city outreach programs to help food-insecure adults, families and children. Table 4 shows the variety of programs that each food bank offers. For example, the Food Rescue Program collects perishable food from over 150 area grocery stores, restaurants, caterers and discount retailers. The program salvages the food before it spoils and distributes it to those in the community without any requirements for assistance. On the other hand, the Virginia Peninsula Foodbank's SHARE program is an example of food assistance open to everyone. Participants must simply do two hours of volunteer service in their community to obtain nutritious food packages at a discounted price.

Table 5 provides some details on programs offered by both agencies. The Backpack 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 children before the weekend to minimize stigma. This program delivered more than 530,000 nutritious meals to children in Hampton Roads in 2019. In contrast, the mobile pantries distribute fresh, healthy food directly into the communities. These pantries distributed 3.2 million pounds of food in 2019. This program helps individuals and families access food when traveling is difficult, or when their local food bank is at capacity.

Breaking down the revenues of each Hampton Roads food bank illustrates the source of food aid in the region (Table 6). While both local food banks have fundraisers and food drives to collect resources, they rely primarily on receiving food donations from larger corporations. Donated food makes up over 75% of the revenues for each agency. The top food donors for the Virginia Peninsula Foodbank are AAFES Dan Daniels Distribution, Aldi, BJ's Wholesale Club, Costco Wholesale Corp. and Earth Fare, while the Foodbank of Southeastern Virginia and the Eastern Shore's top food donors are Food Lion, Sam's Club, the Virginia Department of Agriculture, Walmart and Aldi.

With such a large proportion of revenue coming from donated food, both food banks rely on heavily on volunteers. According to the Virginia Peninsula Foodbank, volunteers there devoted 32,908 hours during the 2018-2019 fiscal year helping members of their community.

⁸ The Foodbank of Southeastern Virginia and the Eastern Shore serves Norfolk, Portsmouth, Chesapeake, Virginia Beach, Suffolk, Franklin, Southampton County, Northampton County, Accomack County, Sussex County and Isle of Wight County. The Virginia Peninsula Foodbank serves Newport News, Hampton, Williamsburg, Poquoson, York County, James City County, Gloucester County, Mathews County and Surry County.

TABLE 4

PROGRAMS OFFERED BY THE FOODBANK OF SOUTHEASTERN VIRGINIA AND THE EASTERN SHORE AND THE VIRGINIA PENINSULA FOODBANK

Foodbank of Southeastern Virginia and the Eastern Shore	Shared Programs	Virginia Peninsula Foodbank
Healthy School Market Program	BackPack Program	SHARE Program
Healthy Food Pantry Program	Kids Cafe	Culinary Training Program
Foodbank Friday Distribution	USDA Commodities	ServSafe Food Handler Guide for Food Banking Training Program
Community Gardens	Mobile Pantry	
SNAP Application Assistance	Warehouse Distribution	
Plant-A-Row for the Hungry	Summer Food Service Program	
	Food Rescue Program	

Sources: Foodbank of Southeastern Virginia and the Eastern Shore programs, found at <https://foodbankonline.org/what-we-do/food-programs/>, and Virginia Peninsula Food Bank programs, found at <http://hrfoodbank.org/programs/>, April 2020

TABLE 5

FOOD DISTRIBUTED AND MEALS PROVIDED BY FOOD BANKS IN HAMPTON ROADS

Program	Foodbank of Southeastern Virginia and the Eastern Shore	Virginia Peninsula Foodbank
Mobile Pantry	1.4 million pounds of food distributed	1.8 million pounds of food distributed
BackPack Program	317,194 meals provided	213,428 meals provided

Sources: Foodbank of Southeastern Virginia and the Eastern Shore, 2018-2019 Annual Report, and the Virginia Peninsula Foodbank, 2018-2019 Annual Report, April 2020. Fiscal year 2019 statistics for both food banks run July 1, 2018, to June 30, 2019.

TABLE 6**SELECTED COMPONENTS OF REVENUE, FY 2019:
FOODBANK OF SOUTHEASTERN VIRGINIA AND THE EASTERN SHORE AND THE VIRGINIA PENINSULA FOODBANK**

Revenue Source	Foodbank of Southeastern Virginia and the Eastern Shore	Virginia Peninsula Foodbank
Donated Food	\$24,490,202	\$16,125,728
Monetary Donations	\$ 4,290,983	\$ 1,962,469
Grants	\$ 1,621,737	\$ 939,636
Program Fees	\$ 210,033	\$ 601,141
United Way	\$223,651	\$ 221,676
Total*	\$ 32,198,295	\$ 20,289,404

Sources: Foodbank of Southeastern Virginia and the Eastern Shore, 2018-2019 Annual Report, and the Virginia Peninsula Foodbank, 2018-2019 Annual Report, April 2020. Fiscal year 2019 statistics for both food banks run July 1, 2018, to June 30, 2019. *Columns do not add to total due to omitted revenue sources. Full totals can be found in both annual reports.

The Role Of Race Cannot Be Ignored

How does race influence food insecurity among American households? As protests erupted after the death of George Floyd, the discussion of issues related to race has only increased in importance. Hampton Roads is certainly, by accident of history or demographics, not immune from such conversations.

An in-depth examination of how race and systemic racism influences food insecurity is beyond the scope of this report. However, Graph 3 illustrates that a significantly larger proportion of the Black and African American and Hispanic populations are food insecure relative to the white population. The proportion of Black or African American households that report very low food security is almost three times higher than the proportion of white households.

There are a number of economic reasons why Black or African American and Hispanic households are relatively more food insecure. Workers in these households, on average, earn lower wages, have shorter job tenures and have less vibrant career trajectories. On average, median household income and wealth is lower in these households, so they are more susceptible to economic shocks. The loss of a job, an unexpected medical expense or an arrest can tilt the odds against these economically fragile households.

Yet, one cannot readily dismiss the argument that some substantial portion of the observed economic deficits between Black and African American households and other racial or ethnic groups is due to racism. Discrimination lowers incomes and opportunities, which, in turn, increases the average level of food insecurity for Black or African American households. Working to reduce racism would alleviate the disproportionate burden of food insecurity from households of color. Eliminating racism and other forms of discrimination is not only morally right, but also necessary for a nation to achieve its true promise.

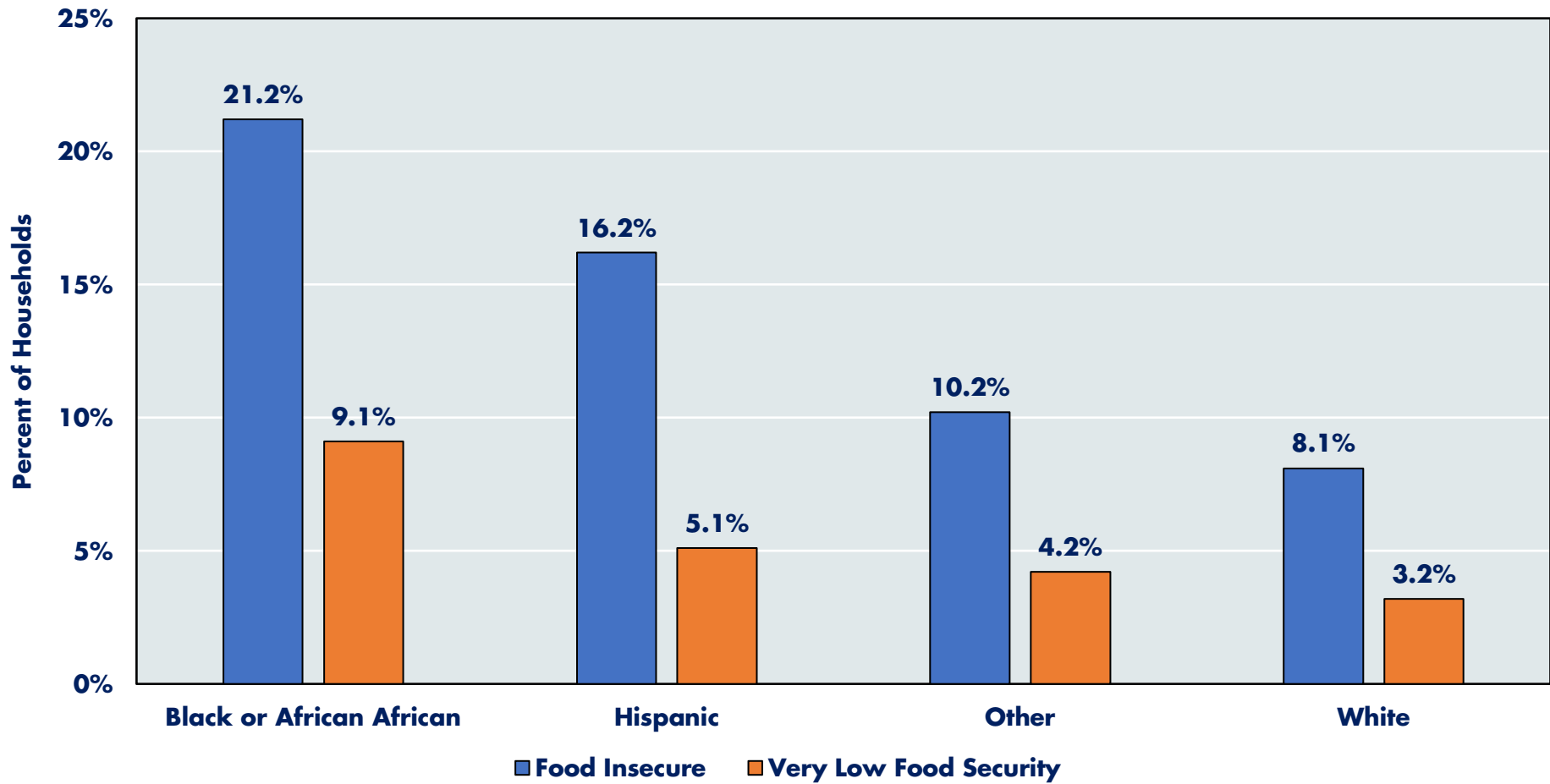
We also must note, however, that eliminating racism would not eliminate food insecurity. Why? As we have discussed previously in this chapter, reducing unemployment and improving incomes reduces food insecurity, to a point. Food insecurity is “sticky,” rapidly increasing in times of crisis and declining, to a point, in times of growth. We can, however, strive to ensure that all people are treated equally and justly so that our efforts to reduce food insecurity provide benefits to all households.

Although food insecurity does not discriminate by age or race and can become a reality experienced by anyone, African American and Latino individuals are disproportionately impacted in our region and throughout the nation by this complex social issue. These individuals often live in communities with a high concentration of poverty and racial minorities where access is limited to healthy food and other resources – such as health care, affordable housing, employment and workforce development – that can improve one’s quality of life and lead to economic self-sufficiency. The food insecurity disparities by race, in particular, illustrate persistent structural challenges throughout Hampton Roads. Fortunately, these challenges are not too great to overcome and comprehensive solutions are attainable. As long as enough people continue to care, together, we can solve hunger and address the root causes of food insecurity.

**– Ruth Jones Nichols, President and CEO
Foodbank of Southeastern Virginia and the Eastern Shore**

GRAPH 3

FOOD INSECURITY BY RACE: UNITED STATES, 2018



Source: USDA, Economic Research Service, using data from the December 2018 Current Population Survey Food Security Supplement. Hispanics may be of any race. www.ers.usda.gov/data-products/food-security-in-the-united-states

Final Thoughts

Food insecurity is not something that happens to “someone else.” One in 10 American households reported food-insecure conditions in 2018, and the most recent estimates for Hampton Roads suggest that 1 in 9 residents experienced food insecurity in 2017. 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 is not a problem that only impacts individuals and families. It is also a public health crisis. Food insecurity 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. They have been agile and adapted to the growing demand. However, they need more support to continue to meet the needs of food-insecure households. The food banks are doing incredible work, but assistance is still needed from the local, state and federal governments to help families as our nation recovers from the 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. The simple investment of time and resources multiplies the impact of food donations across Hampton Roads.

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 into middle school and high school curricula. If personal health is a core subject, then personal 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 many children. 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 throughout our school systems are not only laudable, but a necessity in times of economic uncertainty.

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

The Kids Are Not All Right: Youth Mental Health In Hampton Roads



THE KIDS ARE NOT ALL RIGHT: YOUTH MENTAL HEALTH IN HAMPTON ROADS

We've all been through community traumas before. ... But somehow this event feels different, and it is. ... This is an invisible threat; we don't know who is infected, and anybody could infect us. This is an ambiguous threat; we have no idea how bad this will get. We have a very uncertain future; we don't know how long this will last. And this is a global threat; no community is safe. Moreover, our need to social distance conflicts with our natural desire to connect with our friends and family during stressful times. And our typical sources of distractions such as national or personal sports or going to the gym, going to restaurants or bars, movies or travel, are all restricted by this crisis.

– Roxane Cohen Silver, Ph.D., Professor of Psychological Science, Medicine and Public Health,
University of California, Irvine

Doctors, counselors, and mental health advocates agree: A growing number of our children are in crisis. More and more young people, particularly teenagers, report that they are anxious or depressed. Within the last five to 10 years, schools and medical providers have seen an uptick in youth and their families seeking treatment for mental health issues – behaviors such as self-harm, substance abuse and cyberbullying. The COVID-19 pandemic, the closure of schools due to stay-at-home orders and the ongoing economic recession have thrown this crisis into sharp relief.

Data from the National Survey on Drug Use and Health (NSDUH) reflect the increasing percentage of adolescents (ages 12-17) who have experienced a major depressive episode (MDE) in the past year. In 2007, 8.2% of adolescents had at least one MDE. By 2017, 13.3% of adolescents had experienced at least one MDE. The rise in depression among adolescent girls has been even sharper, increasing from 11.9% in 2007 to 20% in 2017. Girls were nearly three times more likely to report symptoms of depression than boys in 2017.

Even more troubling, the rise in adolescent depression correlates with a striking rise in suicides. While the suicide rate increased for adolescents and young adults from 2000 to 2017, the fastest climb occurred among 10-14-year-olds (Graph 1). Suicide rates fell for this group from 2000 to 2011,

but climbed rapidly from 2012 to 2017. In 2012, the suicide rate was 1.4 per 100,000 10-14-year-olds, 8.3 per 100,000 15-19-year-olds and 13.6 per 100,000 for 20-24-year-olds. By 2017, these rates climbed to 2.5, 11.8 and 17.0 per 100,000, respectively. Suicide is now the second leading cause of death (behind accidents) for all people ages 10-24.

Experts can't say for sure what is causing such distress; 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.”¹ Stephanie Osler, director of the mental health program at Children’s Hospital of The King’s Daughters (CHKD) in Norfolk, told us that some youth may be less equipped to manage distress than in years past. She notes that people of all ages have become used to having what we want or need at our fingertips – information, entertainment, social connections, even how to get from Point A to Point B – and that young people, in particular, may not be developing resilience in the same ways as before.

There is broad consensus that the “hyperconnectedness” of today’s teenagers, and the role of social media in particular, 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 around 2012 to the historical moment 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.²

Needless to say, not all youth who require mental health services are clinically depressed or suicidal. An oft-cited statistic is that 1 out of 5 youths have a diagnosable mental health condition. 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 has held remarkably constant between 2007 and 2017, hovering between 5.1% and 6%. The range for children reported to have “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 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). 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.

This chapter explores the state of mental health care for Hampton Roads youth. We begin by looking at how Virginia and Hampton Roads compare to other parts of the country, both with respect to the well-being of our youth and the accessibility of care. We’ll take a close look at the CHKD mental health hospital that is now under construction, followed by an overview of other notable resources in our region. Finally, we will consider the effects of COVID-19 on the mental health of Hampton Roads youth.

HOW TO FIND HELP

CHKD Mental Health Program: Call 757-668-4673 (HOPE)

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

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. You can also text the Crisis Help Line at 741741.

Your opening message can say anything.

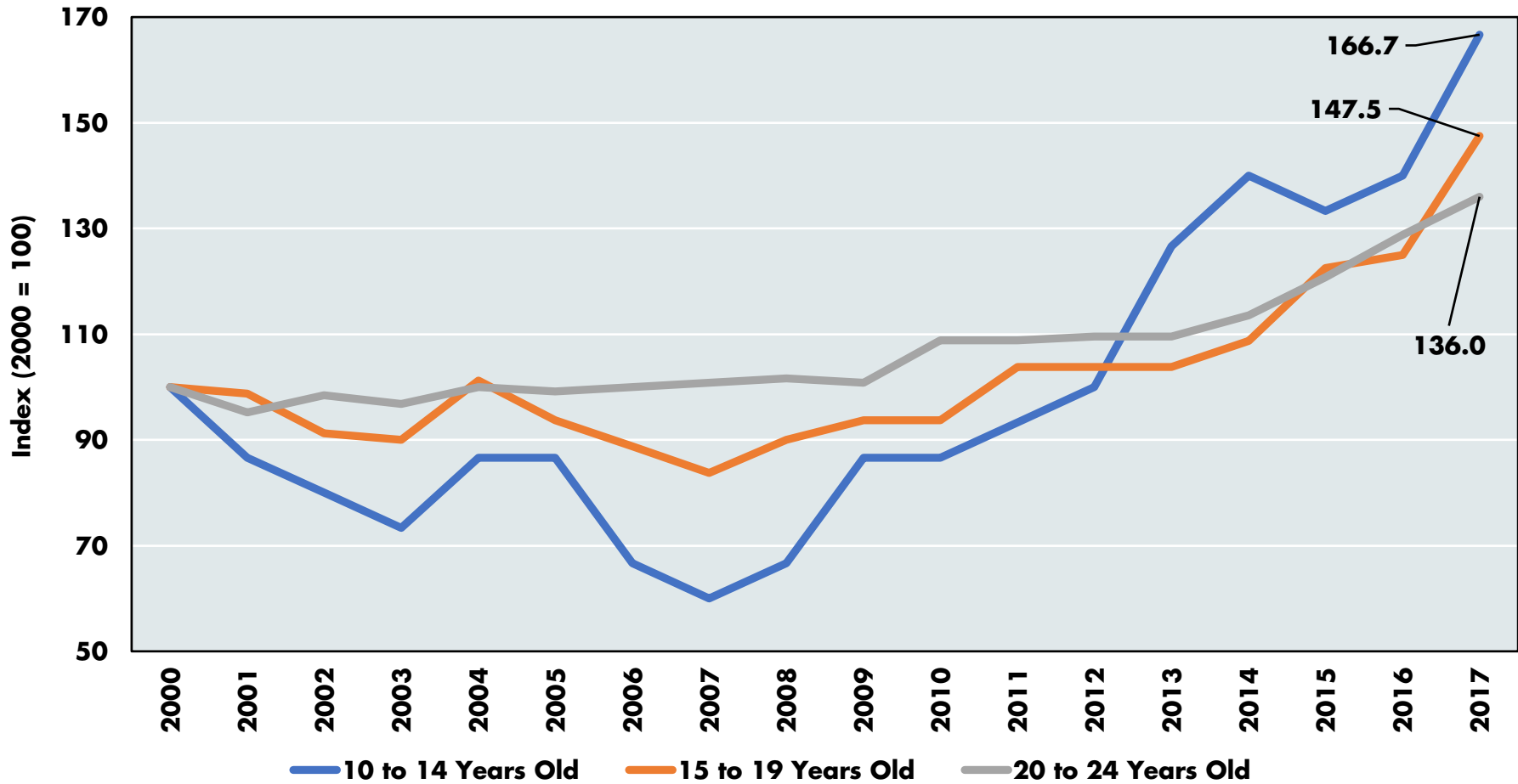
Learn more at: <https://www.crisistextline.org/>

¹ Kate Julian, “What Happened to American Childhood?” *The Atlantic* (May 2020), at: <https://www.theatlantic.com/magazine/archive/2020/05/childhood-in-an-anxious-age/609079/>.

² Jean Twenge, “Have Smartphones Destroyed a Generation?” *The Atlantic* (September 2017), 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), at: <https://theconversation.com/the-mental-health-crisis-among-americas-youth-is-real-and-staggering-113239>.

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>

Mental Health In Virginia And Hampton Roads: How Are We Doing?

For the past six 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 2020 State of Mental Health in America Report uses data from 2016 and 2017. Let's first examine how Virginia fares relative to other states with respect to youth (ages 12-17) mental health.

While Virginia appears to fare reasonably well compared to other states, ranking 17th out of 51, there is not much to brag about in the data (Table 1). Over 13% of Virginians ages 12-17 suffered at least one major depressive episode in the past year and 9.1% 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 28.3% received some type of consistent care.

Some caveats are in order. First, as noted above, 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 (a comparatively large proportion of adults with any mental illness who could not see a doctor due to costs, or who were uninsured) (Table 2). Indeed, Mental Health America notes that Virginia's adult ranking sank from 13th to 42nd place between 2011 and 2017 – the largest decrease anywhere in the country. However, since the latest data are from 2016-2017, and Virginia has recently expanded Medicaid, these estimates may improve in the future.

TABLE 1

**VIRGINIA'S MENTAL HEALTH RANKING, 2016-2017:
YOUTH, AGES 12-17**

Indicator	Indicator	Ranking
Youth with at least one major depressive episode (MDE) in the past year	13.2%	24
Youth with severe MDE in the past year	9.1%	27
Youth with substance use disorder in the past year	3.7%	10
Youth with MDE who did not receive mental health services	51.3%	9
Youth with severe MDE who received some consistent treatment (7 to 25+ visits a year)	28.3%	25
Children with private insurance that did not cover mental or emotional problems	7.8%	25
Students identified with emotional disturbance for an Individualized Education Program (IEP), per 1,000 students	8.4 per 1,000 students	20
Overall youth ranking	-	17

Source: 2020 State of Mental Health in America Report, Mental Health America, <https://www.mhanational.org/issues/mental-health-america-youth-data>

TABLE 2

VIRGINIA’S ADULT MENTAL HEALTH RANKING, 2020

Indicator	Indicator	Ranking
Adult Prevalence of Mental Illness - Adults with Any Mental Illness (AMI)	18.8%	23
Adults with Substance Use Disorder in the Past Year	7.8%	22
Adults with Serious Thoughts of Suicide	4.2%	22
Adults with AMI Who Are Uninsured, 2020	12.4%	37
Adults with AMI Who Did Not Receive Treatment	54.8%	25
Adults with AMI Reporting Unmet Need	28.3%	47
Adults with Disability Who Could Not See a Doctor Due to Costs	34.5%	47
Overall Adult Ranking	-	42

Source: Mental Health America (2020), Mental Health in America – 2020. <https://www.mhanational.org/issues/mental-health-america-adult-data>

Nationally, the CDC reported that the suicide rate for youth ages 10-14 increased from about 1 per 100,000 to 2.5 per 100,000 in 2017. For youth ages 15-19, the suicide rate increased from about 8 per 100,000 in 2010 to 11.8 per 100,000 in 2017. In 2017, suicide was the second leading cause of death for persons aged 10–14 and 15–19 in the United States.

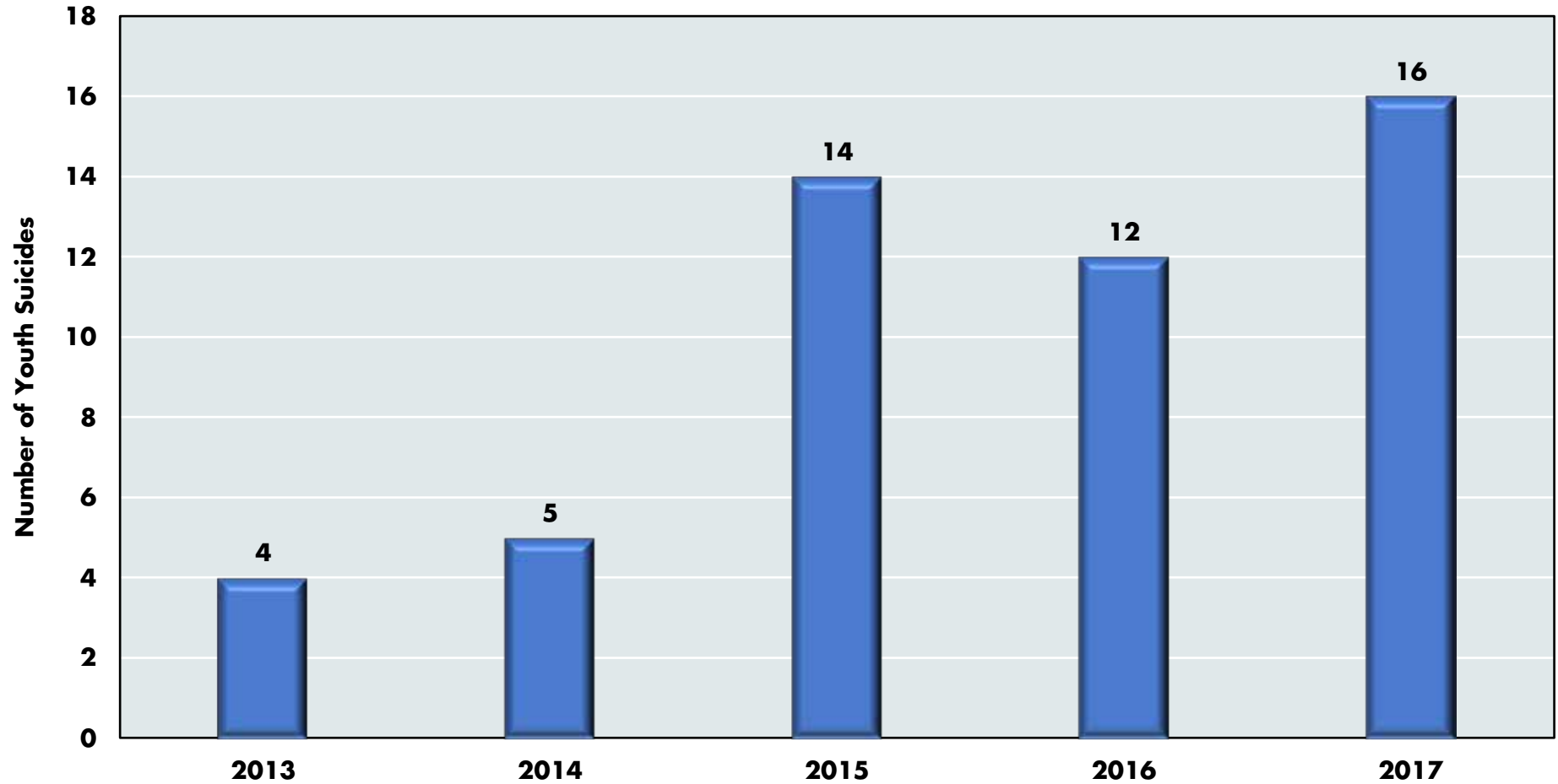
Virginia Violent Death Reporting System (VVDRS) statistics reveal the number of suicides by youth ages 10-19 in Hampton Roads from 2013 to 2017 (Graph 2). These numbers suggest that the prevalence of youth suicide in our region is somewhat below the national averages. However, the bad news is a clear upward trend in the number of young people who took their own lives. In 2013, four Hampton Roads residents ages 10-19 died by suicide (1.8 deaths for every 100,000 persons in this age group). By 2017, this number had climbed to 16 (7.7 deaths for every 100,000 persons in this age group).

Youth suicide touched almost every locality in the region, as seen in Graph 3. Chesapeake and Norfolk had the greatest number of youth suicides in this time period – 13 and 10 deaths, respectively. Suicide rates were highest in localities with comparatively small populations (Poquoson, Southampton County and Williamsburg), since even one or two youth suicides affected their rates sharply. The city of Franklin and Mathews County, on the other hand, reported no youth suicides from 2013 to 2017.

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. Most 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. The Centers for Disease Control and Prevention (CDC) estimates that 12,624 such specialists are currently needed; CHKD’s Stephanie Osler suggested that the need might even approach 30,000. Courtney Boone, president of the board of directors of NAMI Coastal Virginia (NAMI is the National Alliance on Mental Health), regularly hears from families in our region who face weeks-long wait lists before seeing a specialist. An available child psychiatrist, she told us, is “almost like a unicorn.”

GRAPH 2

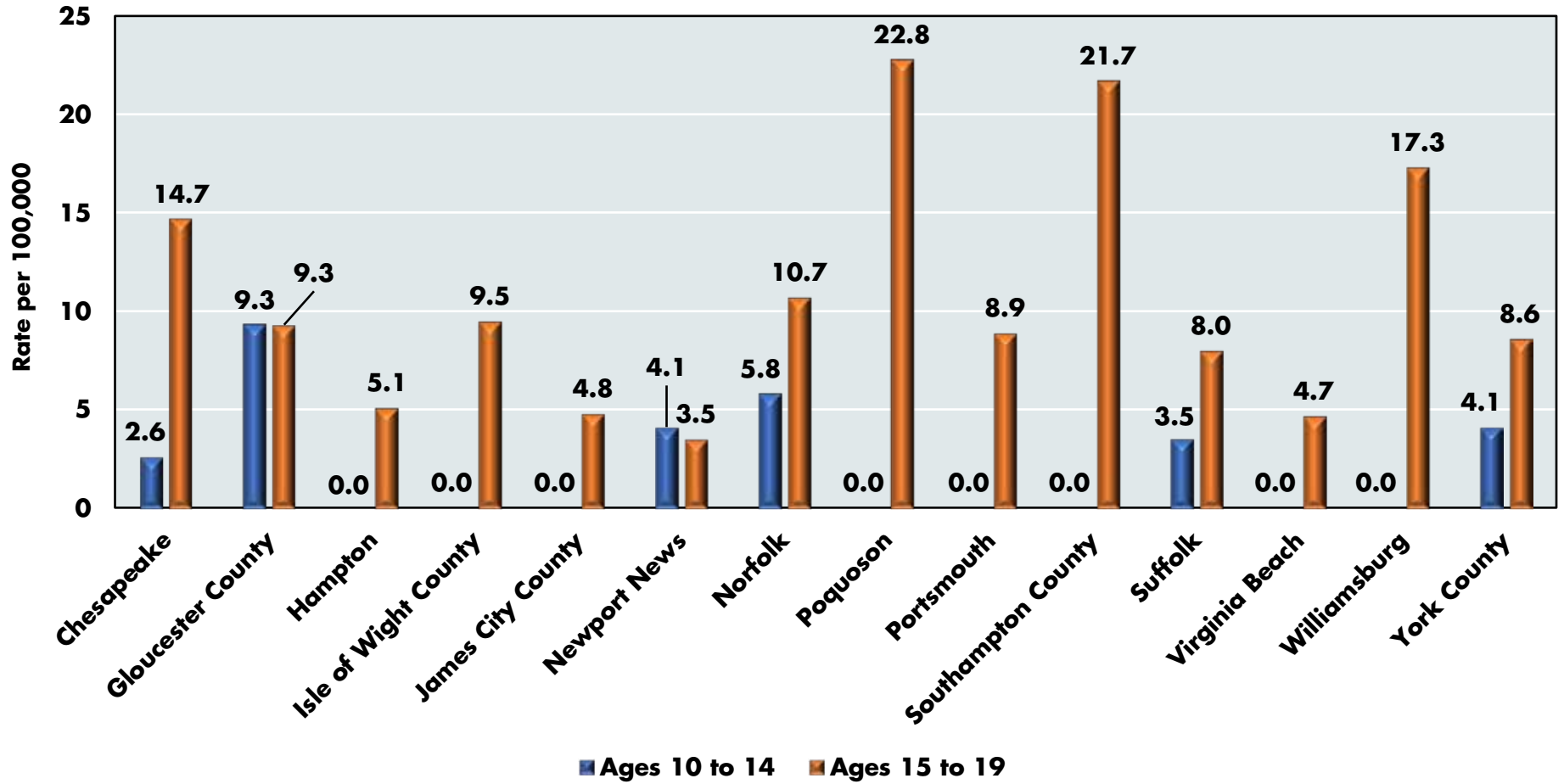
**NUMBER OF SUICIDES AMONG INDIVIDUALS AGES 10-19:
VIRGINIA PORTION OF HAMPTON ROADS, 2013-2017**



Source: Virginia Violent Death Reporting System, <https://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/virginia-violent-death-reporting-system/>

GRAPH 3

YOUTH SUICIDES PER 100,000 RESIDENTS BY LOCALITY:
VIRGINIA PORTION OF HAMPTON ROADS, 2013-2017



Source: Virginia Violent Death Reporting System. Franklin and Mathews County reported no suicides for individuals ages 10-19 from 2013 to 2017 and are excluded from this graph. Available at: <https://www.vdh.virginia.gov/medical-examiner/fatality-review-surveillance-programs-reports/virginia-violent-death-reporting-system/>.

Geography is one of the key 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 Hampton Roads localities (Table 3). Mathews County, for example, had no reported psychiatrists or psychologists as of the most recent data. CHKD's most recent Community Health Needs Assessment, in 2019, confirmed this outcome.

Taken as a whole, the Hampton Roads region has a comparatively strong presence of mental health providers, but in some rural areas, families have to drive for over an hour or more to see a specialist, a hurdle that is particularly onerous for lower-income families and those who lack transportation. The CHKD report notes that families in the westernmost parts of Hampton Roads often cite heavy James River Bridge traffic as an obstacle to accessing care. The ratio of residents to mental health providers in CHKD's service area (1,980:1) is well above the Virginia (630:1) and North Carolina (440:1) averages, although this includes several counties that are outside the Hampton Roads metropolitan statistical area (Graph 4).³

Improving children's access to behavioral and mental health care emerged as the top priority for the experts, stakeholders and other community members who participated in CHKD's 2013, 2016 and 2019 Community Health Needs Assessments. In the next section, we will look at how CHKD, Virginia's only freestanding children's hospital and a foremost provider of pediatric care at multiple sites in Hampton Roads, has made mental health a chief focus of its planning for the future.

³ CHKD Community Health Needs Assessment (June 2019), at: https://www.chkd.org/uploadedFiles/Documents/About_Us/Community%20Benefits_2019%20Community%20Health%20Needs%20Assessment.pdf; and CDC Rural Health Policy Brief, at: <https://www.cdc.gov/ruralhealth/child-health/images/Mental-Health-Services-for-Children-Policy-Brief-H.pdf>. See Graph 4 for a list of counties and cities serviced by CHKD.



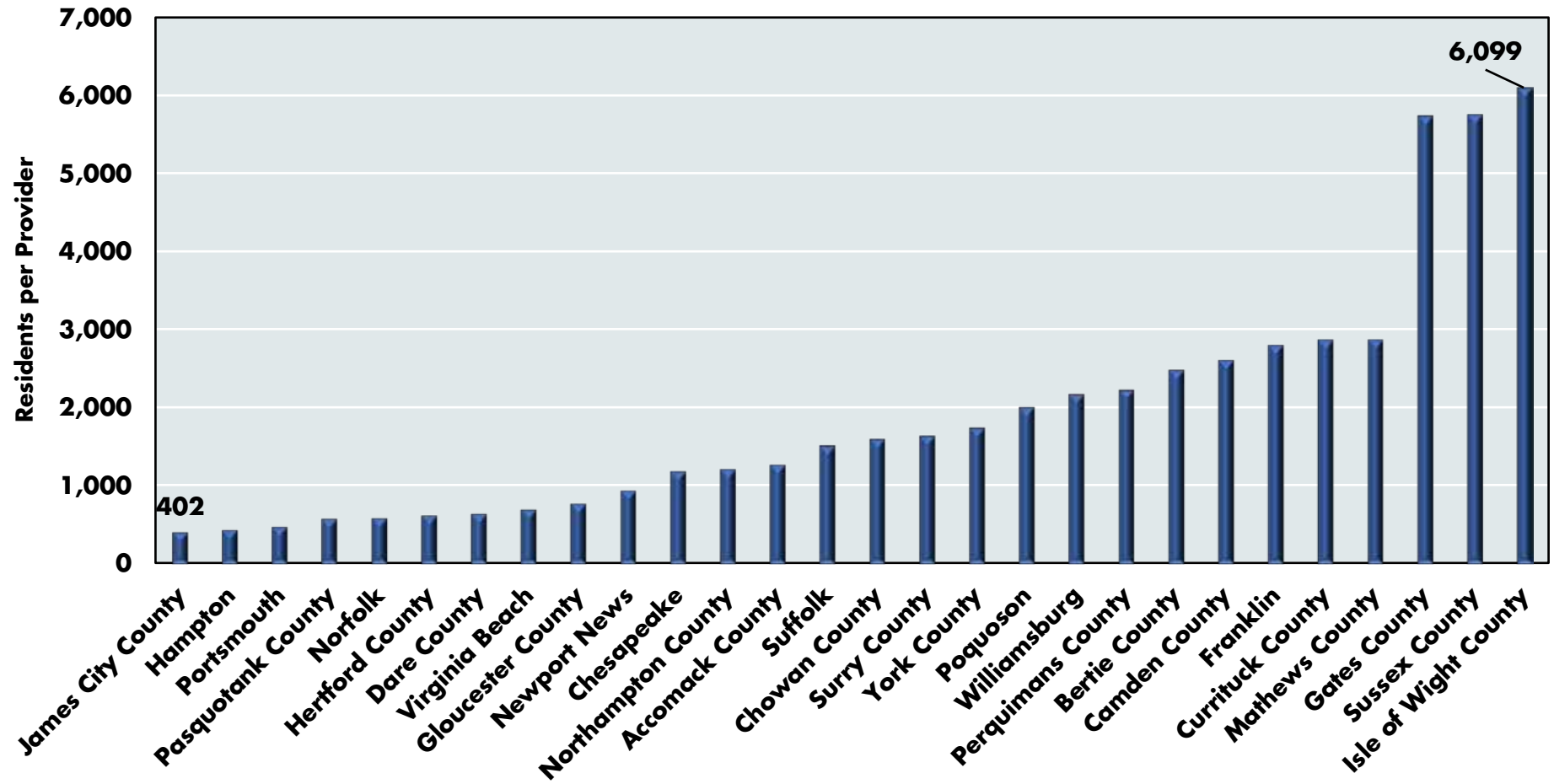
TABLE 3**NUMBER OF PROVIDERS PER 10,000 CHILDREN AGES 0-17 YEARS:
VIRGINIA LOCALITIES IN HAMPTON ROADS, 2015**

Locality	Pediatricians	Family Medicine Physicians	Licensed Social Workers	Psychiatrists	Psychologists
Chesapeake	9.1	17.2	11.7	1.9	3.9
Franklin	4.5	22.4	0.0	0.0	8.9
Gloucester County	1.3	13.2	17.1	1.3	9.2
Hampton	4.0	12.4	40.3	6.7	13.8
Isle of Wight County	1.3	18.4	2.6	2.6	1.3
James City County	10.5	26.3	25.0	14.4	23.0
Mathews County	6.7	13.4	6.7	0.0	0.0
Newport News	6.3	14.7	15.1	0.9	10.0
Norfolk	16.2	11.6	28.9	5.8	17.4
Poquoson	3.8	30.4	19.0	7.6	7.6
Portsmouth	8.0	16.4	25.3	4.4	15.6
Southampton County	2.9	8.7	0.0	0.0	0.0
Suffolk	9.7	13.9	5.5	3.2	4.2
Virginia Beach	9.1	15.5	21.7	4.4	10.4
Williamsburg	6.4	19.3	0.0	6.4	6.4
York County	7.5	26.3	10.6	8.8	5.0

Source: Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities. Estimates may be inflated for localities with fewer than 10,000 children. Available at: <https://www.cdc.gov/childrensmenatalhealth/stateprofiles-providers/virginia/index.html>.

GRAPH 4

RESIDENTS PER MENTAL HEALTH PROVIDER IN CHKD SERVICE AREA, 2018



Source: CHKD (2020)

A Mental Health Crisis: One Family's Experience

J. is a single mother of three children. Approximately two years ago her oldest daughter, S., who is now 16, was diagnosed with bipolar disorder.⁴ Their story illustrates the numerous challenges that beset Hampton Roads families whose children struggle with serious mental health issues.

Since S. first began exhibiting symptoms, she has received acute inpatient care at two different facilities – one of which was several hours away, as there were no available beds in our region. Because S. has acted out violently, the police have been called to their home numerous times. Assault charges brought S. to two different group homes for teenagers in crisis, followed by court-ordered, at-home counseling sessions as part of a family crisis intervention program. Because one of the legal charges brought against S. was a felony (assault against a police officer, a charge that was later dropped), she could not continue to attend her local public high school, where she had a good relationship with her guidance counselor and several teachers. She is now enrolled in an online high school – a learning environment that has alleviated tensions with peers, but which also lacks the structure of a traditional school. S. now receives private individual and family counseling, and these sessions, too, have gone completely online since the onset of the pandemic. A downside of this arrangement is that when S. gets angry or frustrated, she can now just turn off the computer or walk out of the room.

A striking part of S.'s story is how many different mental health providers she has worked with in just two years. Her mom, J., has not been dissatisfied with the care that S. has received once she was finally deemed eligible to receive it, and their insurance plan has adequately covered many of the costs. J. is, however, understandably upset that it took a felony charge – despite S.'s diagnosis and documented history of violence – to have her daughter finally placed in more intensive care settings. J. notes that acute inpatient care and group homes are, by nature, only short-term solutions. Now that S.'s legal

case has been settled, J. worries that “the heavy guardrails” her daughter still urgently needs are no longer in place.

S.'s story further illustrates the major role that law enforcement authorities have come to play in access to mental health care for the most seriously affected youth. J. has heard from numerous police and parole officers about the significant uptick in adolescents struggling with mental health issues who are in danger of hurting themselves or others. She has simultaneously found, however, that these officials do not always understand which mental health services are available in specific situations, and that they have not always given her the best information. She worries that laws and procedures to protect mentally ill youth, and also their families, have not yet caught up with the current situation. Even so, she urges parents who fear that their children are in danger of harming themselves or others to reach out for immediate help by calling 911.



⁴ We have changed the names of the family members for their anonymity. We thank the family for sharing their experience.

CHKD Builds For The Future: A New Youth Mental Health Hospital For Hampton Roads

Stephanie Osler, director of the mental health program at Children’s Hospital of The King’s Daughters, told us conversations about youth mental health began to gain new urgency around a decade ago, as doctors encountered more and more young patients with various issues, sometimes complex and overlapping. Medical professionals had become increasingly aware of how chronic physical conditions also affected mental health. There was – and remains – a shortage of beds for Hampton Roads children who need acute psychiatric care, while youth with certain conditions, including autism and eating disorders, were regularly sent out of state for specialized treatment.

In 2014, CHKD opened its first mental health clinic—a single office in Norfolk, with one child psychiatrist and six clinicians. The program expanded rapidly, and within a year and a half, CHKD employed 24 therapists who provided outpatient mental health care in nine different locations. With the number of mental health visits and consults increasing steadily each year (Graph 5), the discussion began to shift toward building a new, dedicated mental health facility, to include not just outpatient care, but also a small number of inpatient beds.

CHKD’s board of directors unanimously approved the proposal, and in July 2018 Virginia state authorities gave the go-ahead for construction. Plans for the facility have since become more ambitious; a \$224 million, 14-story tower on the CHKD/EVMS/Sentara medical campus in Norfolk is now slated to open in 2022 (Figure 1). It will include 60 inpatient beds and offer an array of other outpatient treatments, including a “partial hospitalization” program that can provide children with services for six to eight hours a day, for several weeks at a time. The extended design process for the new facility was informed by discussions with community stakeholders and visits to six other children’s hospitals around the country. All inpatient beds will be in single rooms, with space for a parent or guardian to spend the night. The tower will include space for soccer and basketball, and perhaps even a small recording studio.

The CHKD mental health hospital will provide urgently needed services to Hampton Roads children (Table 4). Its contribution to our region’s economic development will also be substantial. CHKD is already one of the top employers in Hampton Roads; the new hospital will ultimately bring in around 400 new staff – including child psychiatrists, nurses, chaplains and mental health coaches – at an average starting salary of around \$75,000. Notably, CHKD aims to employ 20 child psychiatrists (in the summer of 2020, it had eight) once the new facility is fully operational. These efforts will not only dramatically expand mental health services for children in the region, but they will also complement the efforts of other organizations.

TABLE 4

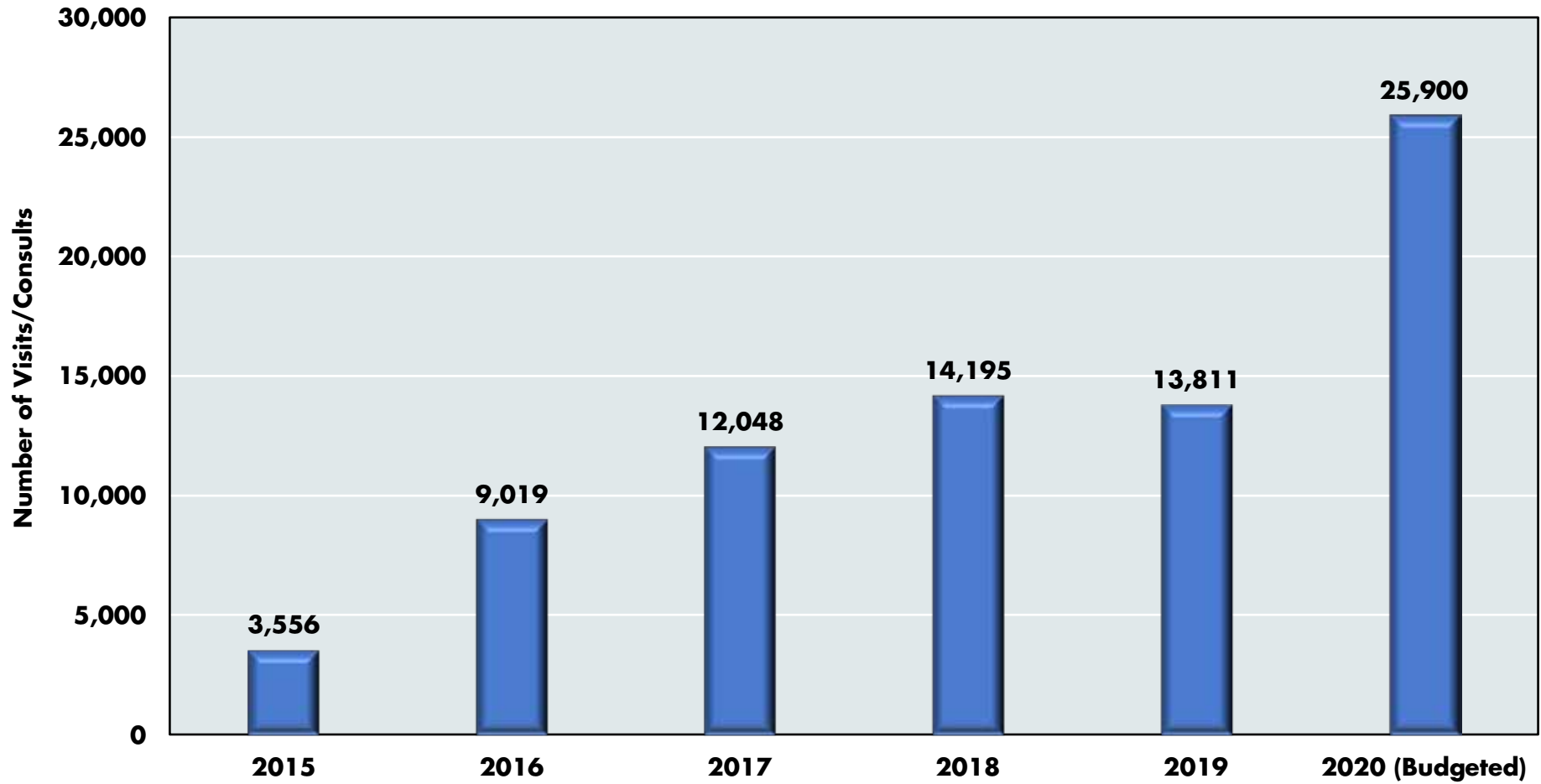
ACUTE CARE BEDS DEDICATED TO CHILDREN’S MENTAL HEALTH IN HAMPTON ROADS

Facility	Number of Current Beds	Number of Beds Planned by 2022
Kempsville Center for Behavioral Health (Norfolk)	48	72
Newport News Behavioral Health Center (Newport News)	24	24
Riverside Behavioral Health Center (Hampton)	20	20
Bon Secours Maryview Behavioral Medicine Center (Portsmouth)	12	12
Children’s Hospital of The King’s Daughters (Norfolk)	0	60
Total	104	188

Source: CHKD (2020)

GRAPH 5

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



Source: CHKD (2020)

FIGURE 1

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



Mental Health And Suicide Prevention Organizations In Hampton Roads

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, their families and caregivers. Hampton Roads is home to three affiliates, the largest of which is NAMI Coastal Virginia, which serves southside Hampton Roads and the Eastern Shore. The Peninsula is home to two additional affiliates in Williamsburg and Hampton-Newport News.

This spring, NAMI Coastal Virginia was the first Virginia affiliate to place all of its classes and support groups online in response to the COVID-19 pandemic. Courtney Boone, president of the board of directors, tells us that as a result, the affiliate’s outreach now extends well beyond the immediate geographic region. While the organization serves all ages, it has a new committee that is dedicated solely to child and youth programming. 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 the organization offers to schools, faith-based organizations and other community groups in our region. NAMI Coastal Virginia also offers classes for parents on topics such as children with challenging behaviors, how to navigate school services and, now, parenting during the pandemic. All NAMI classes, special programs and support groups are offered free of charge.

The Sarah Michelle Peterson Foundation in Norfolk aims to raise awareness about the warning signs of depression and suicidal behavior. Eric and Michelle Peterson established the foundation to honor their teenage daughter Sarah, who lost her battle with depression in 2014. The foundation offers several different evidence-based programs, some geared specifically to middle school and high school groups (and their parents and teachers). Programs teach participants how to identify signs of depression, how to start helpful conversations and where to go for help. Eric and Michelle Peterson

told us that their work’s emphasis on public awareness, prevention and destigmatization takes inspiration from evolving public health responses to medical conditions such as cardiac arrest and HIV-AIDS. A goal is to train a core group at workplaces and other institutions in how to identify and respond to suicidal behavior—similar to now-customary training in cardiopulmonary resuscitation (CPR) and how to operate an automated external defibrillator (AED). In 2019, the Sarah Michelle Peterson Foundation conducted 140 separate suicide-prevention training sessions throughout Hampton Roads.

The Chas Foundation honors Charles (Chas) Kirkwood, who suffered from bipolar disorder and lost his life to suicide as a young man in 2011; his mother, Tucker Corprew, is now the foundation president, and his brother Beau Kirkwood is the executive director. As with the Sara Michelle Peterson Foundation, the Chas Foundation works to lower barriers to mental health treatment in Hampton Roads and strives to reduce the stigma for those suffering from mental illness. Today, these foundations provide important services to the Hampton Roads community: advocating for people of all ages who are suffering from mental illness and saving lives through suicide prevention and awareness.

Mental Health, Military Families And Hampton Roads

Hampton Roads has one of the largest concentrations of military families in the country. Children in these families have a distinct set of mental health needs arising from frequent moves, parental deployments and sometimes the effects of post-traumatic stress. In addition to wide-ranging services provided by the U.S. military, Hampton Roads is home to two private, nonprofit organizations that specialize in providing care to the children of veterans and active-duty service members: The Barry Robinson Center and the Steven A. Cohen Military Family Clinic at The Up Center. Although their focus on military families

is comparatively new, both institutions have deep roots serving vulnerable children in our region.

In 2016, philanthropist Steven A. Cohen launched a nationwide network of mental health clinics to serve primarily post-9/11 veterans and their families. Three years later, Virginia Beach became the 14th site in the country to host one of these specialized clinics. The Cohen Veterans Network's local partner is The Up Center, which has a long history of providing services for at-risk children and families in Hampton Roads – including foster care and adoption, youth mentoring, and financial and parenting education. In less than one year, the new clinic has served 90 children (18% of its clients) with a wide variety of diagnoses. The Up Center's CEO, Tina Gill, and chief program and strategy officer, Andrea Long, told us that key strengths of the clinic's services for children are not only reflected by its special competence with trauma and other issues confronting military families, but also by a dedicated emphasis on the entire family unit.

The Barry Robinson Center is a residential facility for boys and girls (ages 6-17) who require more intensive treatment for diagnoses such as depression, anxiety or substance abuse. Established as a Catholic boys' school in Norfolk in 1933, the center's mission has evolved over the years. The focus on military-connected families crystallized under CEO Rob McCartney's leadership since 2012, allowing the institution to specialize in treatment for a key regional constituency. McCartney and Justin Hoover, vice president of administrative services, told us that the children's shared background helps to foster a sense of community. The center is distinctive for its college-like campus, low therapist-child ratio (about 1:6), and its identity as a "Christian organization with deep Catholic roots." The typical length of residence at the center is six months, and around 150 children (from Hampton Roads and elsewhere) are served each year. Additionally, The Barry Robinson Center supports a number of community-based services – including foster care and other programs to support at-risk youth throughout Hampton Roads.

COVID-19: The Emerging Impact On Mental Health In Hampton Roads

If there is a thin silver lining to the tremendous human costs of the COVID-19 pandemic, it is that the virus does not seem as deadly for 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 persons 18 and under.⁵

Even so, the potential mental health effects of COVID-19 on children are grave – 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 Hampton Roads students have not been in a traditional school setting since the middle of March. They have missed daily check-ins with teachers and counselors, informal interactions with peers and key milestones such as graduations and sports tournaments. It remains to be seen if and how the makeshift online learning experiment of the spring will carry over into the fall, and what the longer-term effects on student outcomes will be. Children from lower-income households, and those who belong to other at-risk populations, are likely to suffer the most from these upheavals.

As we completed work on this chapter in the early summer, specific data on the effects of COVID-19 on children's mental health were not yet available. Numerous surveys, however, have indicated that the mental health of their elders has been profoundly affected. In May, one-third of adults surveyed by the U.S. Census Bureau showed signs of clinical anxiety or depression, a dramatic increase since the onset of the pandemic. A research team at Christopher Newport University, led by psychology professor Sherman Lee, has identified a range of psychological difficulties that are associated with "dysfunctional coronavirus anxiety," including "greater hopelessness, suicidal ideation, spiritual crisis, and alcohol/drug coping." The team has developed

⁵ "Burden of COVID-19 among children," at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/pediatric-hcp.html> (accessed June 22, 2020).

two mental health tests, the Coronavirus Anxiety Scale and the Obsession with COVID-19 Scale, which have been adopted worldwide.⁶

CHKD's Stephanie Osler suggests that we can look to the experiences of children following the collective traumas of Sept. 11, 2001, 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 how children are struggling. Thus, it is particularly important for parents and other responsible adults to watch for unusual changes in kids' behavior – such as 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.

Our conversations with mental health providers in Hampton Roads 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.” In June, The Up Center's Tina Gill told us that the Steven A. Cohen Military Family Clinic had added more clients (including adults) in the past month than any other since its opening in August 2019. The average wait time for an appointment is now 27 days, with longer wait times for children than any other client cohort.

The demands of social distancing have compelled all providers to transform their delivery of services. Within a matter of weeks, nearly all outpatient mental

⁶ S.A. Lee, M.C. Jobe and A.A. Mathis, “Mental health characteristics associated with dysfunctional coronavirus anxiety,” *Psychological Medicine* 1–2 (2020), at: <https://doi.org/10.1017/S003329172000121X>; Jim Hanchett, “Coronaphobia’ tests developed at CNU now used worldwide,” Christopher Newport University Newsroom (April 30, 2020), 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), at: <https://www.pilotonline.com/coronavirus/vp-nw-coronavirus-ptsd-20200523-nlsaw3wvkrfzpoz3zclhkl43jm-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), at: <https://www.washingtonpost.com/health/2020/05/26/americans-with-depression-anxiety-pandemic/>.

health services shifted to telehealth – that is, the use of internet and other technologies to engage virtually with clients. As cited in *The Virginian-Pilot*, 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.⁷ Community organizations such as NAMI Coastal Virginia and the Sarah Michelle Peterson Foundation have likewise moved their programming online.

Although face-to-face contact is ideal, mental health advocates sometimes refer to telehealth as the “next best thing.” In fact, some groups (such as adolescents) may respond particularly well to online counseling. The Up Center's Tina Gill and Andrea Long told us about two creative programs – an online drum circle for teenagers and a virtual visit to a llama farm for younger children – that have proven successful. Further, preliminary evidence from providers seems to indicate that parental satisfaction with telehealth appointments is high, and no-show rates have dropped significantly.

Ashley Airington, a policy analyst at 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.”⁸ 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 some 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.

⁷ Katherine Hafner, “Demand for mental health services in military community surges amid pandemic stress,” *The Virginian-Pilot* (May 5, 2020), at: <https://www.pilotonline.com/news/health/vp-nw-coronavirus-military-mental-health-20200505-xuvcavxzhbb15kjpfnlagjsmoi-story.html>.

⁸ Ashley Airington, “Tele-mental Health in Virginia: Addressing Children's Mental Health Needs during COVID-19,” *Voices' Blog* (May 14, 2020), at: <https://vakids.org/our-news/blog/expanded-telemental-health-services-in-virginia-addressing-mental-health-needs-of-children-during-the-pandemic>.

Final Observations

The treatment of pediatric psychiatric disorders is expensive. Statistics provided by Dr. Gregory K. Fritz, past president of the American Academy of Child and Adolescent Psychiatry, at a May 2019 forum hosted by the Hampton Roads Community Foundation, placed mental disorders at the top of the most costly conditions among children, both in terms of total-dollar and per-child expenditures.⁹ 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 lost 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.”¹⁰

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 ability to work.¹¹ Our region’s mental health care providers – including hospitals, clinics, schools, human services departments and community services boards – provide services that are indispensable to the well-being of Hampton Roads residents. Investing in the mental health of children is an investment in our future.

⁹ See “Children’s Mental Wellness,” at: <https://hamptonroadsfcf.org/Leadership-Initiatives/Childrens-Mental-Wellness>. We are grateful to the Hampton Roads Community Foundation for providing us with access to Dr. Fritz’s presentation.

¹⁰ World Economic Forum and the Harvard School of Public Health, “The Global Economic Burden of Non-communicable Diseases” (September 2011), 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), at: https://ssir.org/articles/entry/the_crisis_of_youth_mental_health.

¹¹ World Health Organization, “Mental health: massive scale-up of resources needed if global targets are to be met” (June 6, 2018), at: https://www.who.int/mental_health/evidence/atlas/atlas_2017_web_note/en/.

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 mental illness is a “choice” or a symptom of “laziness.” If we stigmatize mental health, children will not be open about their needs. 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 individually 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 don’t go to school hungry, we must look at ways to expand services where children spend much of their time during the academic year.

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

Jefferson Lab Ponders Its Future



JEFFERSON LAB PONDERES ITS FUTURE

What if Hampton Roads were selected as the site of a new federal laboratory whose research could be applied to battle cancers, improve surgeries and sterilization procedures, remediate water and sludge, develop super magnets, produce super-cooled materials that lose resistance to electricity, improve the scanning of cargoes at the Port of Virginia and even help defend the United States? This would set off a tremendous celebration and regional citizens would think they had just struck modern technological gold.

The amazing news (to some, anyway) is that this jewel of a high-technology federal laboratory already exists and is operating in our midst – it is the Thomas Jefferson National Accelerator Facility in Newport News (commonly referred to as Jefferson Lab). Jefferson Lab experiments simultaneously improve our understanding of the physical nature of the universe (why physical things behave the way they do) and open doors to an intriguing set of applications. It is high time that the lab's impact and potential become better known.

Formally a laboratory of the U.S. Department of Energy's Office of Science, Jefferson Lab engages in world-class physics research that focuses both on the very nature of matter – how the universe is put together – and applications of that knowledge. Scientists and researchers from around the world join approximately 700 Jefferson Lab scientists and support personnel in utilizing the facility's continuous electron beam accelerator and four associated research halls. Most come to the Newport News facility, but some do so virtually. They use the facility to probe the nucleus, the building block of the universe. The science behind the accelerator is highly complex, yet disarmingly simple in concept. Electrons are accelerated to approach the speed of light (approximately 186,000 miles per second) and directed at stationary targets (such as hydrogen, helium or carbon) to study the nuclei of atoms. Detecting what happens when the collisions occur is the focal point of Jefferson Lab research.

Jefferson Science Associates formally manages the facility for its owner, the U.S. Department of Energy's Office of Science. Jefferson Science Associates is a partnership between about 60 southeastern research universities and PAE,

a large international technology management organization headquartered in Falls Church, Virginia.

The academia connection is an important one because 1,700 researchers in the United States and around the world utilize Jefferson Lab for their research. A majority of the researchers are university faculty members. Regionally, William & Mary and Old Dominion University each boast significant stables of faculty who utilize the laboratory in their research, while smaller contingents exist at Hampton University and Norfolk State University. For example, more than a dozen ODU faculty members run experiments at Jefferson Lab. Seven of these faculty are jointly appointed by Jefferson Lab and ODU, with the institutions sharing their salaries. The laboratory also supports "bridge" faculty members whose salaries are shared by Jefferson Lab and institutions around the country for a period of five years.

To the casual observer, the most visible connection of Jefferson Lab to the region may be Hampton University's Proton Therapy Institute, especially well known for its work in fighting prostate and head and neck cancers. The institute, which opened in 2010, directs precisely focused beams of protons at cancers and tumors to reduce their size or eliminate them entirely. Fortuitously, this can be accomplished in a nonsurgical context. Jefferson Lab's Cynthia Keppel was a founding member of the institute and is jointly appointed at HU. She now leads experiments in the laboratory's Halls A and C and holds nine patents in medical technology.

Jefferson Lab has established a radiation detector and imaging group that applies nuclear physics detector techniques to medical imaging and

diagnostics. This genre of work has led to additional patents on devices used to treat breast cancers and other maladies.

Even if Jefferson Lab were not engaged in world-class research, it would be vitally important to Hampton Roads because of its economic impact. A January 2019 study conducted by W&M professors Roy L. Pearson and K. Scott Swan estimated that the laboratory's 2018 fiscal year regional economic impact was \$269.2 million in economic output, resulting in \$149.2 million in labor income and 2,015 jobs. This places Jefferson Lab roughly among the 50 largest regional institutions in terms of its economic profile.¹

Atoms are the basic building blocks of matter and consist of a nucleus composed of protons and neutrons and orbited by electrons. Streams of electrons (beams) can be used to bombard specific targets, for example, a cancer. When the beam collides with its target, energy is deposited in the tissue cells. This may control or eliminate the cancer. The beams also can kill healthy cells, so electron therapy is best suited for surface cancers. Proton beams, on the other hand, can penetrate to deep-seated tumors.

Jefferson Lab's imprint on the region extends well beyond its scientific research and economic impact. The laboratory has developed strong contacts with area K-12 schools and has become an energetic contributor to science education. Jefferson Lab maintains its own Science Education Team and its personnel frequently make presentations in regional schools. The laboratory also provides a website for K-12 students to prepare for Virginia's Standards of Learning exams. These practice tests, which focus on topics in the fields of science,

¹ Roy L. Pearson and K. Scott Swan, "Economic Impacts and Qualitative Drivers of the Thomas Jefferson National Accelerator Laboratory: Fiscal Year 2018" (January 2019), www6.sura.org/wp-content/uploads/2019/01/FY18JLabImpactRpt.pdf. The duo estimated that the Virginia economic impact of the JLAB was \$308.7 million in economic output, \$168.3 million in labor income and 2,240 jobs. The national economic impact numbers were \$556.9 million in economic output, \$250.7 million in labor income, and 3,448 jobs.



technology, engineering and mathematics (STEM), align with Jefferson Lab's ongoing research program.

More so than some federal laboratories, Jefferson Lab has attempted to be a good citizen and participates in and contributes to a wide variety of educational and social programs in Hampton Roads. As a city council member from the Peninsula observed, "They go out of their way to get involved."

Financial And Programmatic History

The U.S. Department of Energy provided initial funding for Jefferson Lab in 1984 and Congress appropriated construction funds for what would be known as the Continuous Electron Beam Accelerator Facility (CEBAF) in 1986. It was not until 1993, however, that all pertinent aspects of CEBAF were fully in place. CEBAF first used highly focused beams of electrons to explore the state of matter in 1994.

In 1996, CEBAF became the Thomas Jefferson National Accelerator Facility. The first licensing of Jefferson Lab scientific work occurred soon after when Dilon Technologies began to use the lab's technology for detecting breast cancers. The Dilon Navigator Gamma Probe continues to be used to detect cancers and perform surgeries.

In 2009, Jefferson Lab began a major upgrade of CEBAF, a \$338 million project (the 12 GeV upgrade)² that doubled CEBAF's beam energy and was completed in 2017. Graph 1 reports Jefferson Lab's funding for operations and construction between fiscal years 2009 and 2019. The upward bump in funding in the early part of the 2010-2020 decade reflects the impact of the 12 GeV upgrade.

The flow of personnel at Jefferson Lab similarly reflects the impact of the 12 GeV upgrade construction (Graph 2). Personnel exclusive to the lab topped out at 763 in the 2011 fiscal year. In the 2018 fiscal year, there were 721 positions (693 individuals exclusive to Jefferson Lab plus 28 joint/bridge faculty who were shared with universities). In terms of compensation, the lab is an attractive place to work because it pays its workers considerably more than regional averages. **The average employee in the Hampton Roads metropolitan region earned \$23.86 per hour in May 2018.³ This translated to \$49,620 annually. Three-quarters or more of all Jefferson Lab positions pay more than this – many, considerably more. The average salary of a Jefferson Lab worker was \$82,000 in 2019, according to payscale.com.⁴**

Figure 1 shows the locations of the major Department of Energy laboratories in the United States. The labs whose research agendas may overlap with those of Jefferson Lab are Brookhaven National Laboratory on Long Island; Lawrence Berkeley National Laboratory and the Stanford Linear Accelerator Center (SLAC), both of which are located in the Bay Area of California; and the Argonne National Laboratory and Fermi National Accelerator Laboratory, which are both located in suburban Chicago. None of these other laboratories, however, is as much a single-purpose laboratory as is Jefferson Lab.

² A GeV is a giga electron volt of kinetic energy, where giga stands for 1 billion.

³ Bureau of Labor Statistics, "Occupational Employment and Wages in Virginia Beach-Norfolk-Newport News: May 2019," www.bls.gov/oes/current/oes_47260.htm#00-0000.

⁴ "Average Jefferson Lab Salary," Payscale, www.bls.gov/oes/current/oes_47260.htm#00-0000.

One of Jefferson Lab's presumed advantages over the sometimes complementary, sometimes competitive, federal laboratories in New York, Illinois and California has been its lower costs of operation. Graph 3 demonstrates that price levels in general in Hampton Roads are below mid-Atlantic and national average price levels and dramatically lower than prices in the New York City region (where the Brookhaven lab is located) and the San Francisco metropolitan area (site of SLAC and the Lawrence Livermore Berkeley National Laboratory). Prices in Hampton Roads are roughly comparable to those in Chicago, the site of the Argonne laboratory and Fermilab.

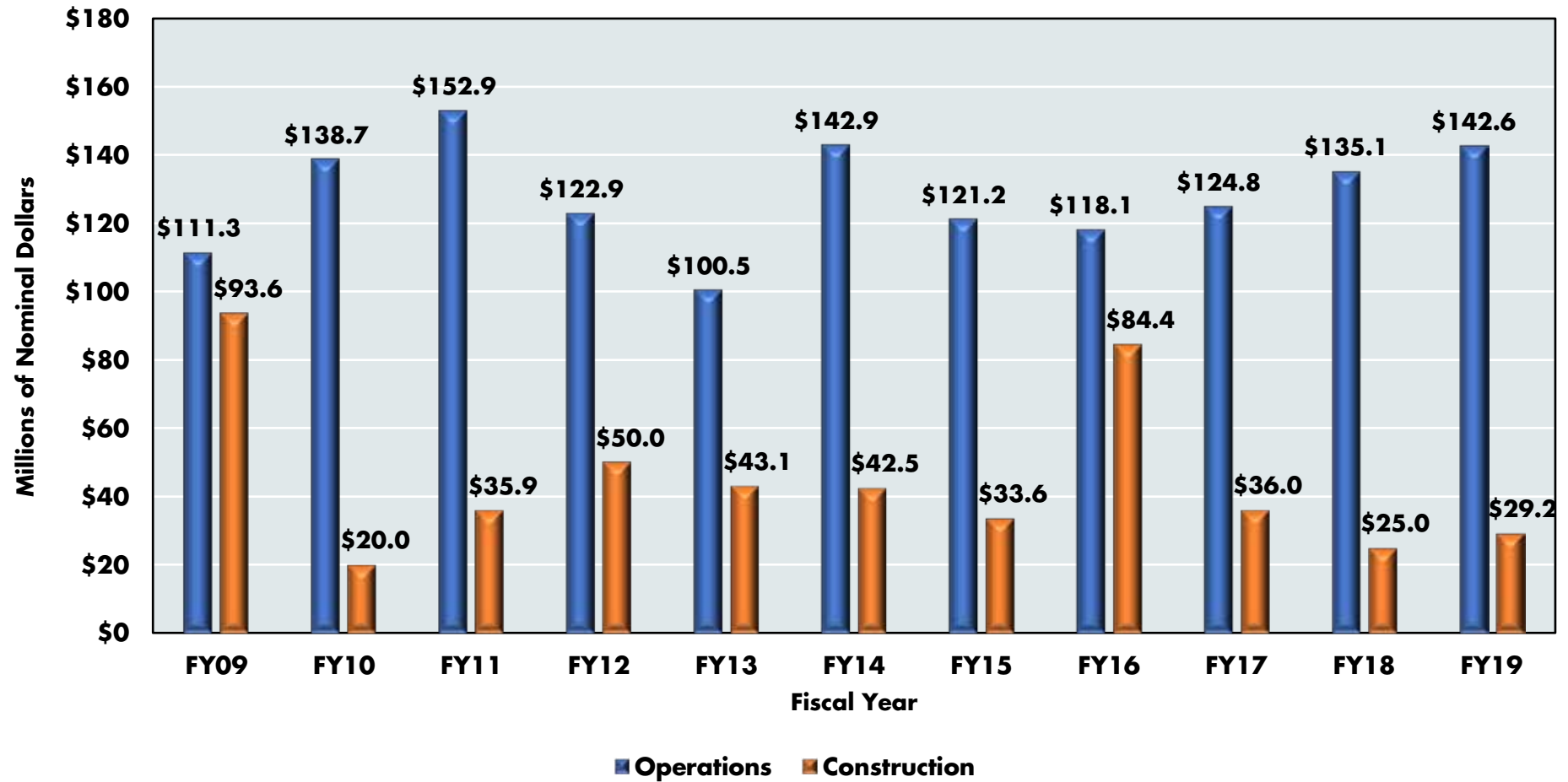
Salary.com, an interesting though less rigorous source of cost-of-living information, reports much larger differentials – prices in the New York City metropolitan region are 83% higher than in Hampton Roads, while prices in the San Francisco and Chicago regions are 62.5% and 16.7% higher, respectively. Salary.com also indicates that prices in Newport News specifically are .44% above the national average.⁵

The moral to the story, however, is that dollars go further at Jefferson Lab than they do at any of its major competitors. It is less expensive to accomplish the same task at Jefferson Lab than it would be at Brookhaven, Livermore or Argonne.

⁵ "Cost of Living Calculator," www.salary.com/research/cost-of-living/virginia-beach-va.

GRAPH 1

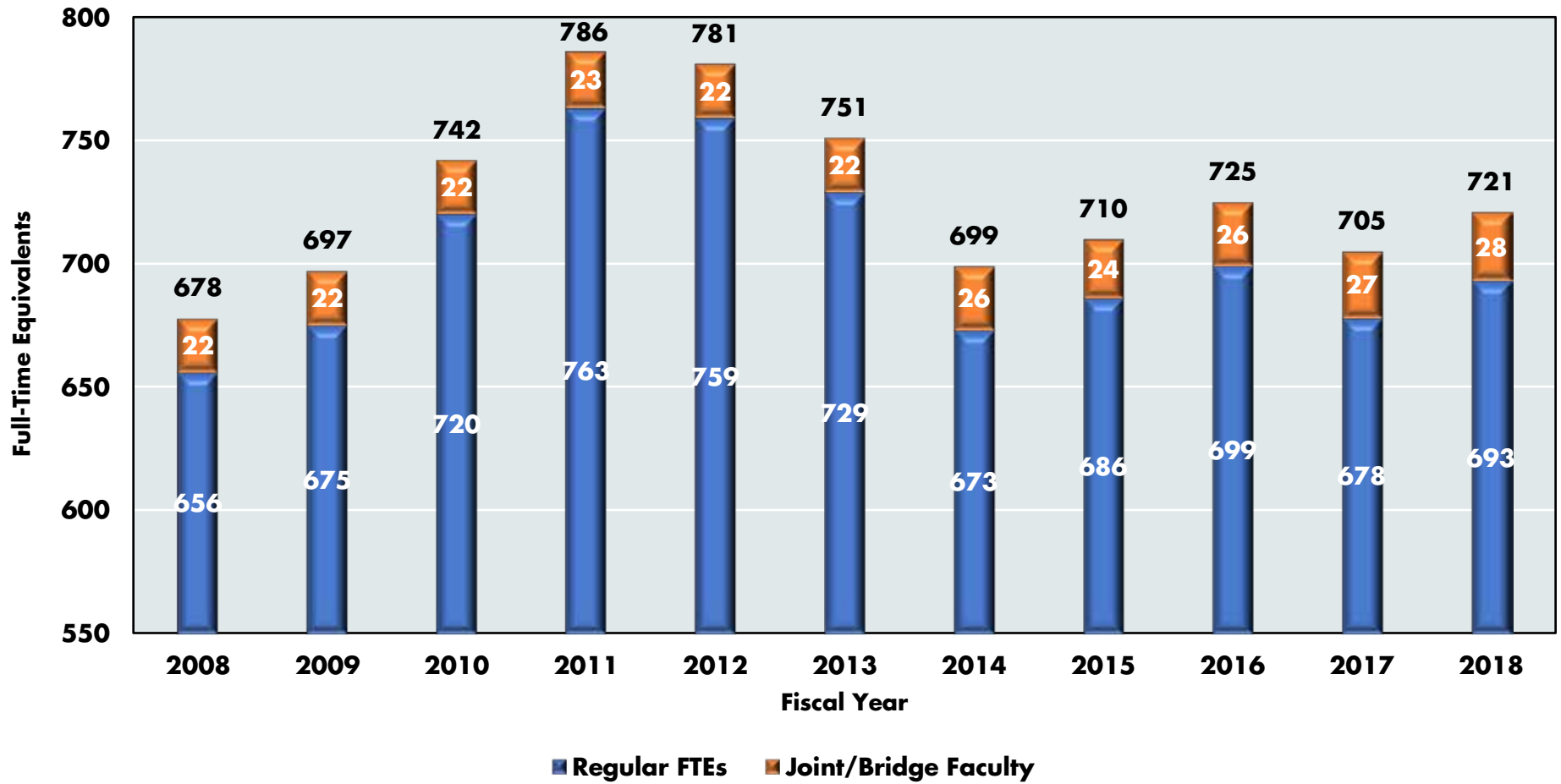
JEFFERSON LAB EXPENDITURES FOR OPERATIONS AND CONSTRUCTION, FY 2009 THROUGH FY 2019
(IN MILLIONS OF DOLLARS)



Source: Jefferson Lab

GRAPH 2

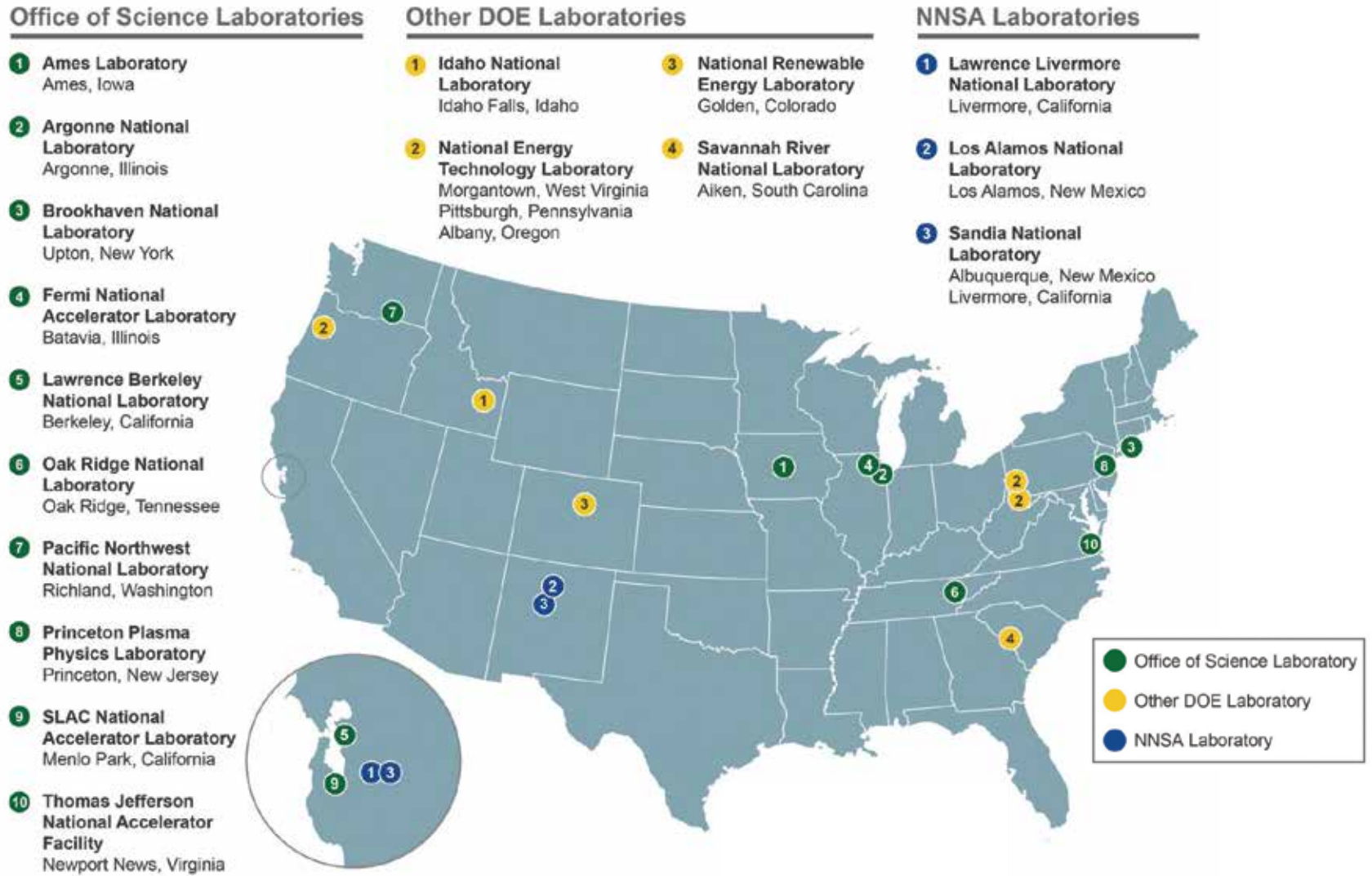
JEFFERSON LAB FULL-TIME EQUIVALENT EMPLOYEE POSITIONS,
FY 2008-FY 2018



Source: Jefferson Lab

FIGURE 1

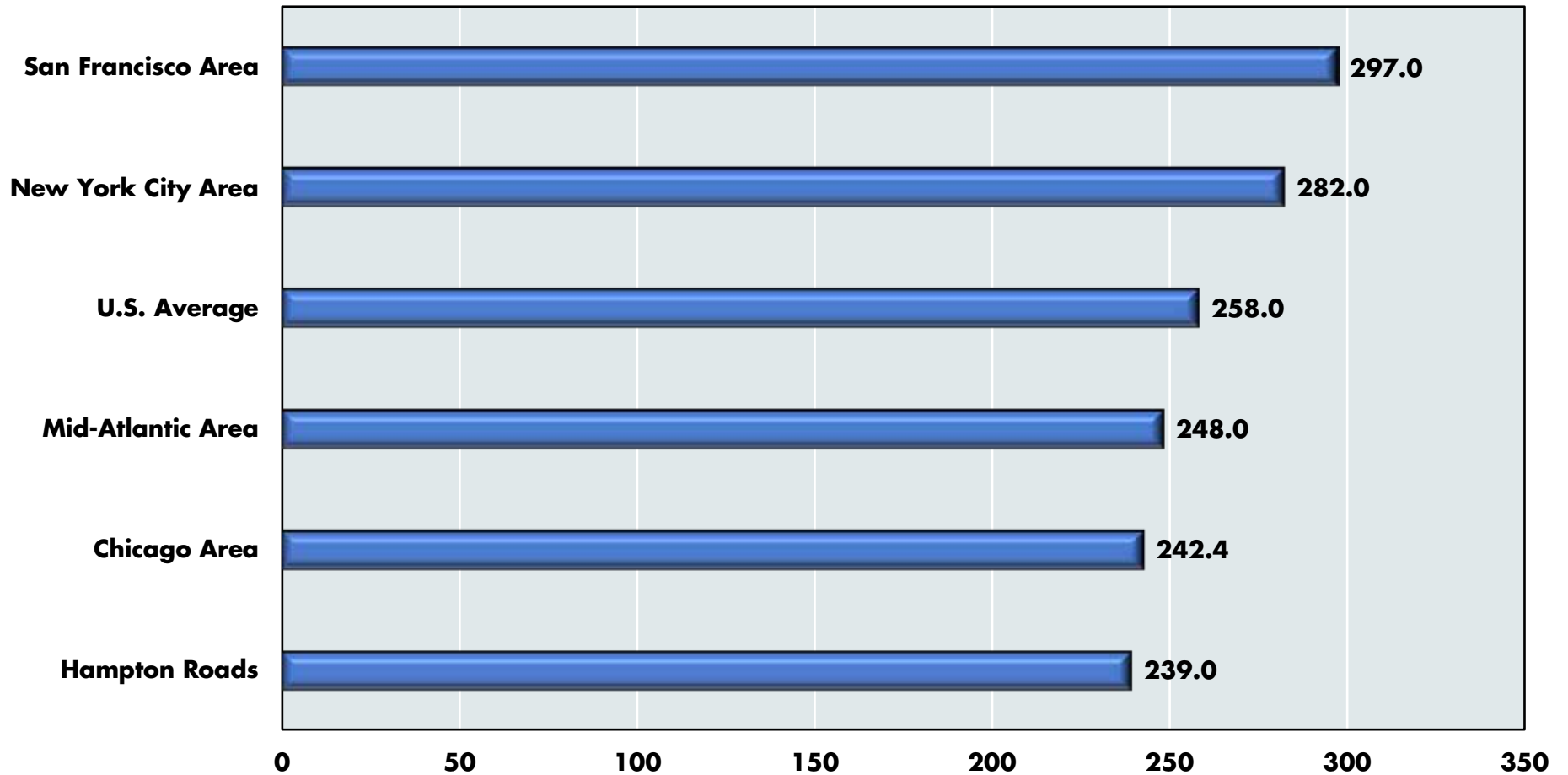
LOCATION OF U.S. DEPARTMENT OF ENERGY LABORATORIES IN THE UNITED STATES



Source: <https://www.energy.gov/science/science-innovation/office-science-national-laboratories>

GRAPH 3

CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS, JANUARY 2020



Source: Bureau of Labor Statistics, www.bls.gov/regions

The Electron-Ion Collider Decision

On Jan. 9, 2020, the Department of Energy announced that its new Electron-Ion Collider (EIC) would be placed at the Brookhaven National Laboratory in Brookhaven, Long Island. The EIC represents a “new window” through which the very nature of matter can be studied.⁶ It has been advertised as a “one of a kind” development that will enable scientists to peer inside protons and, among other things, take the equivalent of 3D pictures of the insides of atomic nuclei.⁷

Jefferson Lab easily could have been chosen as the site for the EIC, given its strong performance record and the cost advantages noted previously. However, when push came to shove, the lab was not selected, and this somewhat unexpected defeat depressed many connected to it. This is despite the fact that Jefferson Lab had just completed the 12 GeV upgrade, while Brookhaven was perceived to be winding down its current science program.

By any standard, the EIC will be a massive project whose total design and building costs could reach \$2.6 billion.⁸ The EIC would have constituted a massive, steady economic development injection into the Hampton Roads economy and would have helped diversify the region’s economic portfolio beyond defense spending.

The Brookhaven National Laboratory was quick to assert that the “Thomas Jefferson National Accelerator Facility (Jefferson Lab) in Newport News, Virginia, is expected to be a major partner in the project and make significant contributions,”⁹ but this could not mask the major disappointment attached to the Department of Energy’s decision.

Some observers hinted that the state of New York’s offer of \$165 million in economic development grants tipped the balance in Brookhaven’s favor.¹⁰ The

⁶ “The Electron-Ion Collider,” Jefferson Lab, www.jlab.org/eic/home.

⁷ Brookhaven National Laboratory, “Department of Energy Selects Site for Electron-Ion Collider (Jan. 10, 2020), www.bnl.gov/newsroom/news.php?a=116998.

⁸ “The Electron-Ion Collider,” <https://www.sciencemag.org/news/2020/01/department-energy-picks-new-york-over-virginia-site-new-particle-collider>.

⁹ Brookhaven National Laboratory.

¹⁰ “Editorial: Learn from Jefferson Lab’s Strikeout,” *The Virginian-Pilot* and the *Daily Press* (Jan. 14, 2020), www.pilotonline.com/opinion/vp-ed-editorial-jefferson-lab-collider-0114-20200114-eeewdisdovf55bs4euxmmw4ezi-story.html.

precise value of Virginia’s bid for the EIC is unknown, but all observers agree that the New York state offer massively exceeded that of Virginia. Plausibly, Virginia’s recent success in winning the Amazon headquarters expansion contest – despite being substantially outbid in economic incentives by several other states including New York – led those involved in Virginia’s bid to conclude that the size of economic development incentives being offered was not the key to success. At this time, we do not know.

New York’s bid no doubt also benefitted from the existence of a more robust nearby university research connection than held true in Virginia. Graph 4 reports National Science Foundation research and development (R&D) expenditures for a variety of institutions in 2017. Stony Brook University (a unit of the State University of New York) recorded more than \$238 million in R&D expenditures in 2017. All major Hampton Roads institutions combined weighed in at only \$155.9 million in funded R&D. Put simply, there is more “big-time” funded research activity going on near the Brookhaven Laboratory than there is surrounding Jefferson Lab, and this may have been a persuasive factor.

In addition, it cannot be asserted that the Hampton Roads universities would be closer to an EIC located here than an EIC on Long Island would be in relation to Stony Brook. Stony Brook is 22 miles away from Brookhaven, while Old Dominion and William & Mary are almost exactly the same distances away from the Jefferson Lab. Further, Brookhaven is only 65 miles from Manhattan, where research giants Columbia University (\$947.5 million in R&D expenditures in FY 2017) and New York University (\$887.6 million in FY 2017) are located.¹¹

Air and rail connections from Hampton Roads likely did not help Jefferson Lab’s proposal. It takes considerable time for anyone to travel from the lab to sites such as Washington, D.C., Brookhaven or Livermore (to name representative locations). Driving from Hampton Roads to Washington, D.C., one must count on a three-hour trip at minimum, with the understanding that the precise time of arrival can be rather unpredictable. Flights from Jefferson Lab to more remote locations initially require a trip to airports in Norfolk or Richmond and then at least one connecting flight. Rail transportation

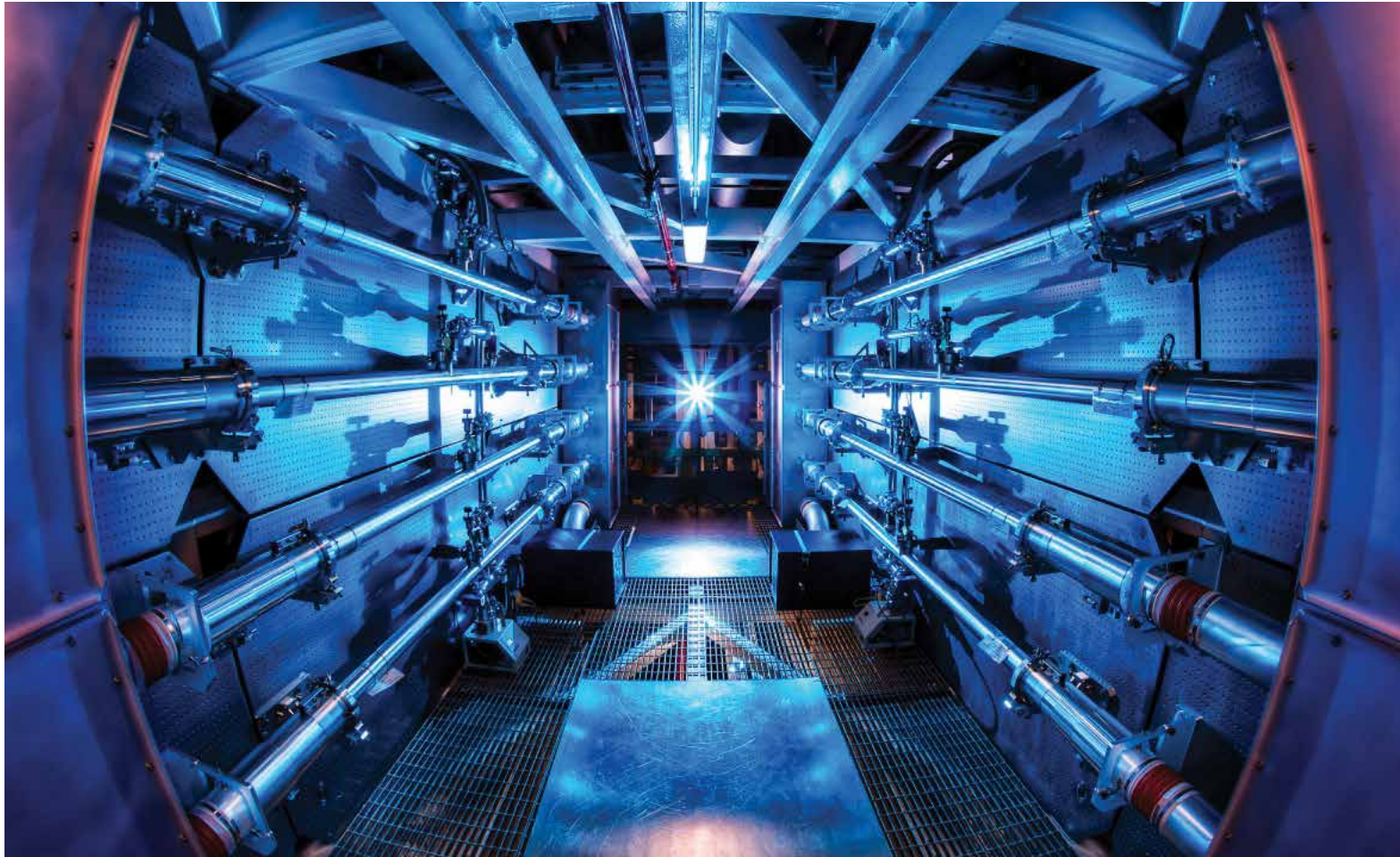
¹¹ National Science Foundation, “Rankings by Total R&D Expenditures,” <https://ncesdata.nsf.gov/profiles/site?method=rankingBySource&ds=herd>.

is promising, but not yet developed. By contrast, LaGuardia Airport, with connections to anywhere in the world, is about 70 minutes distant from Brookhaven.

It also is possible that Jefferson Lab's single-purpose nature worked against it in this high-level competition. The lab is very good at what it does but its work has been more narrowly focused. The Brookhaven, Argonne and Livermore laboratories support multipurpose science programs. "Everything is related to everything else in science," commented an experienced JLAB researcher,

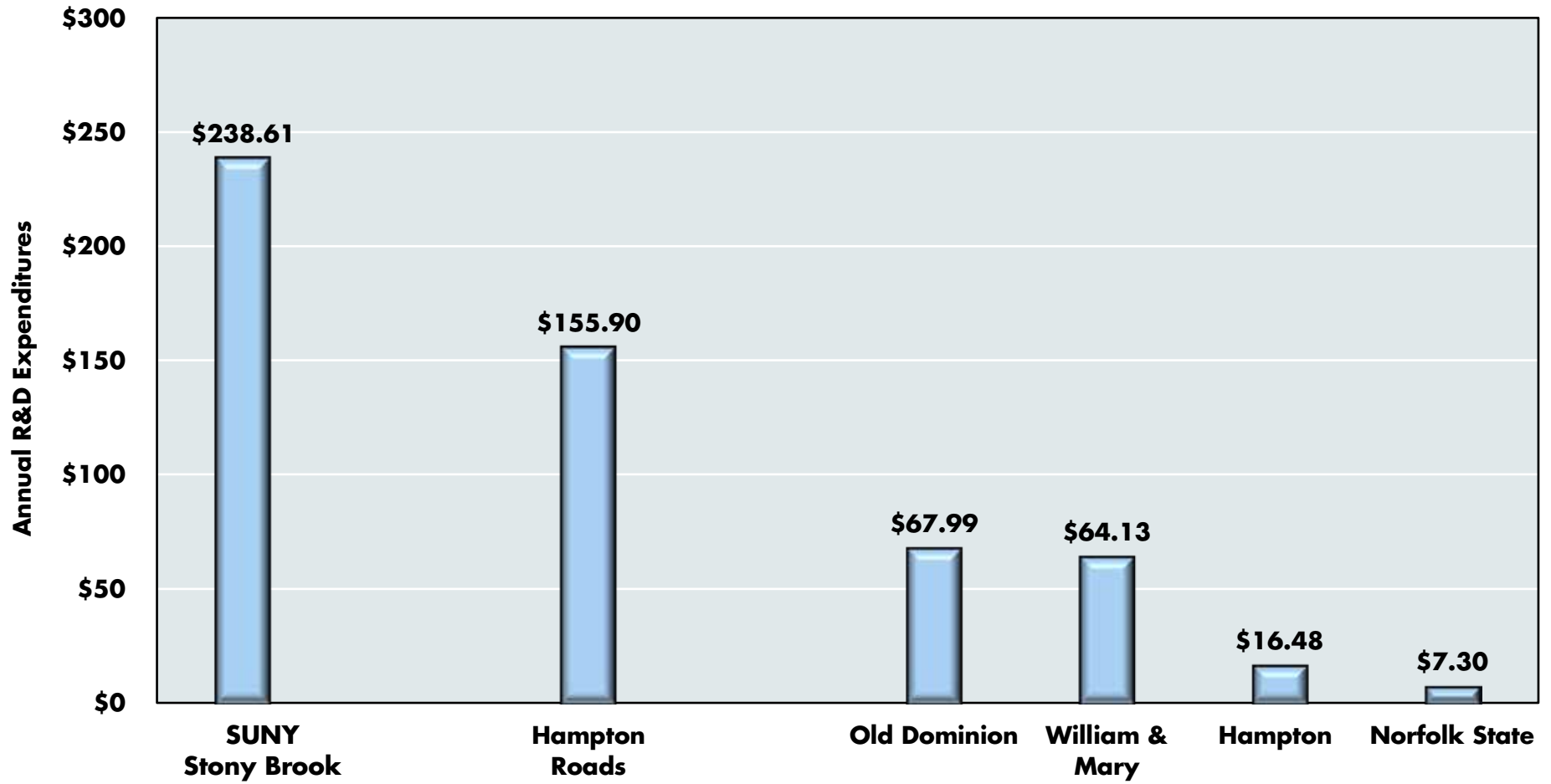
because broader modes of scientific inquiry often generate superior (sometimes serendipitous) results. Further, some of the same equipment and techniques (such as high-speed computing) that are used in energy research also can be used in other contexts (and vice versa). We address these possibilities in the next section.

Finally, one should not discount the impact of classic political factors on the EIC location decision. Such decisions seldom are made in a political vacuum.



GRAPH 4

**TOTAL RESEARCH AND DEVELOPMENT EXPENDITURES FOR SELECTED INSTITUTIONS, 2017
(IN MILLIONS OF DOLLARS)**



Source: National Science Foundation, "Rankings by Total R&D Expenditures," <https://ncesdata.nsf.gov/profiles/site?method=rankingBySource&ds=herd>

Broadening The Scope Of Jefferson Lab And Increasing The Focus On Applications

A consensus has arisen in and around Jefferson Lab that it should pursue opportunities to broaden its scientific focus. The lab's traditional focus has been nuclear physics but Robert McKeown, its deputy director for science, notes that this is but one of six major program areas in the Department of Energy's Office of Science. Nuclear physics accounts for only 3% of this cabinet department's budget expenditures.

Consider the mission statement of the Argonne National Laboratory: *Argonne is a multidisciplinary science and engineering research center, where talented scientists and engineers work together to answer the biggest questions facing humanity, from how to obtain affordable clean energy to protecting ourselves and our environment. Ever since we were born out of the University of Chicago's work on the Manhattan Project in the 1940s, our goal has been to make an impact – from the atomic to the human to the global scale.*¹²

Were Jefferson Lab to adopt a broader scientific mission similar to that of the Argonne National Laboratory, it would open a broad vista of exciting new opportunities for the lab to deploy its considerable expertise. For example, Jefferson Lab believes that it has the ability to do quality work in the areas of high-performance computing, big-data manipulation and cryogenics. Fortuitously, expenditures by the DOE's Office of Science on high-performance computing are one-third larger than those on nuclear physics. An increased emphasis on high-performance computing would be consistent with trends at other major federal energy laboratories. Two of the 10 most powerful supercomputers in the world reside at the Livermore and Argonne labs. "Exascale computing" (systems capable of executing a quintillion calculations per second) has been assigned a high national priority by the United States, not the least because China has entered this arena with great energy. To the extent that Jefferson Lab can contribute here, its work will be highly valued.

¹² Argonne National Laboratory, "About Argonne," www.anl.gov/argonne-national-laboratory.

The Office of the Under Secretary for Science in the U.S. Department of Energy has identified six priority multidisciplinary initiatives: (1) advanced and sustainable energy; (2) artificial intelligence and machine learning; (3) genomics; (4) high-performance computing; (5) large-scale scientific instrumentation; and (6) quantum information science.

Big data is the terminology used almost casually today to refer to the use of predictive analytics to extract value from very large bodies of information. Most people understand that firms such as Google analyze and extract valuable information from the huge amounts of data it accumulates from our Google search and Gmail patterns. Jefferson Lab similarly acquires mountains of information from its experiments, and one of its challenges is to extract meaningful scientific information and patterns from these data. The high-performance computing methods it uses to do so potentially have many governmental and commercial applications.

Cryogenics relates to the production and use of materials that are created or exist at extremely low temperatures. Jefferson Lab currently utilizes very low cryogenic temperatures to accelerate electrons in its beams, operate high-power magnets and produce high-density targets. Laboratory engineers have made critical advances in the field. In general, cryogenic conditions result in materials that sometimes exhibit rare and very useful characteristics – a prime example being superconductivity, when electrical resistance vanishes. In theory, an electrical current facing zero resistance (superconductivity) could persist indefinitely without any additional source of power. If this situation were made commercially feasible, for example, in power transmission, it would have a profound effect on energy use.

Superconducting materials would likely have a wide range of uses in defense, including improvements in the electrical efficiency of naval and jet engines, radar systems and surveillance capabilities. If superconducting materials became commercially feasible, it would have a revolutionary impact on power transmission, computing and many other fields.

Cryogenics is not fantasy science; today's cryogenic techniques are used to freeze foods and vaccines and also to maintain fuels in a liquid state. Previously, we noted the applications of cryogenics to medicine and in particular to surgery. Jefferson Lab has developed promising research avenues in this area.

Another promising research area for the lab is medical imaging. The essence of medical imaging is the creation of a visual representation of the interior of human bodies. Imaging enables physicians and medical personnel to "see" inside a human body without having to cut into it, allowing them to see bones and density of tissue, for example. Jefferson Lab is working to improve the imaging of tumors through the use of nuclear medicine technology. It is not precisely clear where this research will lead but it is fair to say that the imaging cost, accuracy and quality are very important considerations in medicine. The United States currently is spending almost \$4 trillion annually on medical care, and any technique that reduces or controls these costs should receive warm commercial acceptance.

Accelerator science is the name attached to the study of devices that accelerate particles. Potentially fruitful applications of accelerator science include superconductivity, free-electron lasers, high-performance computing, big data, cryogenics and medical imaging. The Center for Accelerator Science at Old Dominion University focuses on such applications and prepares students to take jobs at institutions pursuing the applications.

Related to Jefferson Lab's efforts in medical imaging is Virginia Tech's new Tech Center, recently opened nearby at the corner of Oyster Point Road and Jefferson Avenue. The center is adjacent to the 16-acre parcel and building that the city of Newport News has given the Jefferson Lab, and hence the long-run synergistic potential of these sites is considerable. Nevertheless, given Virginia Tech's significant programmatic and financial obligations connected to the Amazon headquarters development in Northern Virginia, it is not clear

how large its scientific commitment to this development will be. The larger, the better. The first building of an anticipated 10-building technology park represents only a desirable first step.

Given its substantial sponsors and experienced investors, in addition to its prime location, it seems likely that the Tech Center will be a commercial success; however, the probability is lower that it will be of direct and immediate assistance to Jefferson Lab as it moves to broaden its research agenda.

Regional Policy Implications

Jefferson Lab is a world-class nuclear physics research facility. It can become much more. The first step is for the lab to broaden its mission. Regional citizens should give strong support to this transition because Jefferson Lab's potential to generate commercially significant inventions and innovation is huge. Possible applications span medicine, computer science, big data, the environment and national defense.

Our region can hasten and strengthen Jefferson Lab's transition in several ways. First, it can ensure that our congressional delegation and state representatives are fully aware of and support the huge potential of the lab to do high-quality science that lies outside the conventional boundaries of nuclear physics. Second, it should ensure that Jefferson Lab is fully aware of already existing scientific and commercial activities in Hampton Roads that are related to the lab's new directions. Sponsored conversations and visits involving Jefferson Lab and carefully selected university and business personnel have the potential to enrich and expand the lab's endeavors while also capitalizing on its existing technology for commercial applications. Third, the region should back specific federal funding legislation and state budget amendments that will allocate funds to support these efforts. The lab's medical imaging, environmental cleanup and big-data thrust appear to be particularly well matched to the needs and current academic strengths of our region. We should not expect such developments to occur rapidly, however, without resources being devoted to these tasks. "We need to shake the trees in Richmond and

Washington,” commented an elected official. This is sound advice, but will require consultation, cooperation and persistence over several biennia to succeed.

Final Observations

The Thomas Jefferson National Accelerator Facility neither lacks for challenges nor opportunities. Not being designated as the site of the new electron-ion collider was a blow to the lab, but in the long term might turn out to be beneficial. It has forced Jefferson Lab to ask existential questions: Who are we and what should we aspire to become?

Jefferson Lab’s life as a single-purpose laboratory has served it and the region well for nearly three decades. Continuing as a single-purpose laboratory may be possible, but not as rewarding as one that broadens its research mission. Such a step would benefit the laboratory and the region. This is both appropriate and in some ways inevitable. Knowledge typically knows no boundaries, and productive commercial applications frequently draw from multiple academic disciplines. The notion of nuclear physicists working side by side with computer scientists, biologists, physicians and even a stray social scientist from time to time not only is more interesting, but also potentially more productive.

Jefferson Lab’s task now is to select – with great care and working with the DOE – several promising research themes outside the conventional lines of nuclear physics and to give additional attention to commercialization. While much already has been accomplished in this regard, this movement needs to be accelerated. This could mean amending Jefferson Lab’s raison d’être, strategic plan and resource allocation. The consensus is that the lab should not shrink from the task. Nuclear physics will remain the keystone of Jefferson Lab’s activities, but this does not imply that it should be the only activity.

Success will more likely be achieved if the lab has the participation of faculty from area universities who work in this new, broader array of specialties. Of course, this is much more likely to occur if funding is available. Given the substantial commercial potential of a broader mission, the region’s legislators should be supportive of plans, programs and allocations that would cement partnerships among Jefferson Lab, regional academic institutions and the private sector. Matching-fund initiatives that pair the lab with area university faculty make sense and may have the greatest appeal in the Virginia General Assembly.

These are exciting times at Jefferson Lab, as opportunities abound and the laboratory’s willingness to pursue them points to the promise of what is to come. Like Robert Frost’s oft-cited traveler, it has approached a fork in the road. Which direction the lab decides to take will have a profound effect on its future – and that of Hampton Roads.



Inside Front Cover: Hampton Roads Planning District Commission (HRPDC)

Pages 20 and 79: Steve Daniel

Page 63: Navy.mil

Page 107: Virginia Peninsula Foodbank

Page 135: Courtesy of CHKD (2020)

Page 150: U.S. Department of Energy





