

Strengthening Rural Anchor Institutions: Federal Policy Solutions for Rural Public Colleges and the Communities They Serve

Report Prepared by the Alliance for Research on Regional Colleges
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TABLE OF CONTENTS

Executive Summary	5
Introduction	10
Higher Education for Rural People and Places	11
Approach to the Analysis	13
Findings	18
Finding 1	18
Finding 2	22
Finding 3	24
Finding 4	25
Finding 5	31
Federal Policy Solutions	26
Short-term Policy Solutions	36
Long-term Policy Solutions	38
Appendix A: List of Institutions	42
Endnotes	45

About the Alliance for Research on Regional Colleges

The Alliance for Research on Regional Colleges (ARRC) is a research collaborative and resource hub with the mission of increasing appreciation for and understanding of regional colleges and their contributions to opportunity and community wellbeing. The multi-year initiative aims to build research infrastructure, produce data-driven analysis, and disseminate accessible knowledge for a range of audiences.

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Learn More

Additional information about ARRC and an interactive map related to this report can be found at RegionalColleges.org.

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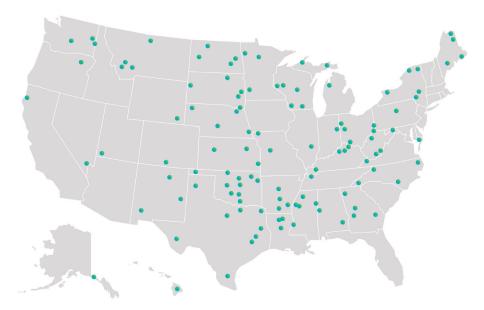
EXECUTIVE SUMMARY

Observers have warned for months that COVID-19 could devastate rural communities due to the prevalence of risk factors among rural people, as well as the financial vulnerability of social institutions. Rural public colleges are a significant social institution for rural communities, which as "anchor institutions" are both place-bound and vital to the health and wellbeing of their regions.

Despite being an essential postsecondary education access point, rural public colleges face challenges that predate the pandemic, and the financial and public health fallout from COVID-19 has only exacerbated these challenges. Rural public colleges also face questions over their relevance, with policymakers at times suggesting mergers or closures of these institutions. At the same time, rural public colleges and the communities they serve are too often ignored in policy discussions.

This policy report highlights the importance of public colleges in rural communities, while also demonstrating how COVID-19 threatens their contributions unless policymakers act swiftly to support them. The report explores a group of 118 rural public colleges throughout the United States that fulfill their anchor institution role by fostering access to postsecondary education, supporting local economies, addressing critical workforce shortages, and contributing to public health infrastructure. These public, bachelor's-granting institutions were selected based on their location in rural communities and whether they are broadly accessible. The group of rural public colleges are located in 39 states, and most are undergraduate-focused colleges that admit over 80% of applicants and mostly enroll in-state students. Although most are regional colleges, the group also includes a few research institutions, land-grant universities, and minority-serving institutions.

Rural public colleges can be found across the United States



Source: Integrated Postsecondary Education Data System

MAJOR FINDINGS

This report has five major findings about rural public colleges and the communities they serve:



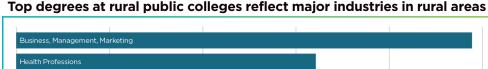
Rural public colleges sustain local economies and fuel community development.

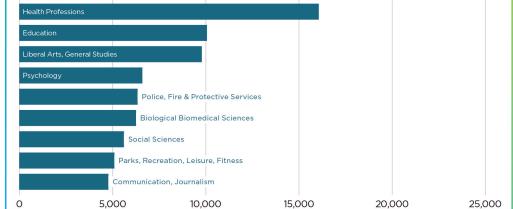
Rural public colleges are often the largest employers in their communities. On average, this group of rural public colleges employed over 500 people, not including third-party contractors. Nineteen counties served by rural public colleges were designated as low employment counties (which the Bureau of Labor Statistics designates as having less than 65% of residents, aged 25-64, who are employed), a number that would jump to 51 if not for the jobs provided by these colleges. Rural public colleges also incubate and develop businesses, with nearly half hosting a business or technology development center. The analysis found that 64% of rural public colleges hosted a museum, a finding illustrating the cultural contributions of rural public colleges to their communities.



Rural public colleges provide college-educated workers for high-demand local industries.

Rural public colleges were often established to address shortages in necessary jobs like teaching and nursing. They are still needed for those exact reasons. Rural public colleges awarded over 120,000 bachelor's degrees, 25,500 master's degrees, and 17,000 certificates and associates degrees in 2019 and have steadily increased the number of degrees they awarded since 2008. The top degrees awarded by rural public colleges align with major industries in rural communities, including including education, health professions, business, hospitality and tourism, and natural resource management. Rural public colleges produced 16,248 degrees in health professions and related programs, including 9,662 nursing degrees, addressing critical workforce shortages in this area. They also awarded 6,573 degrees in homeland security, law enforcement, firefighting, and related protective services, 13,067 teaching certificates, and 5,261 degrees in parks, recreation, leisure, and fitness management in 2019.





Source: Integrated Postsecondary Education Data System



Rural public colleges are important partners in building public health infrastructure and battling COVID-19 in rural communities.

Roughly one-quarter of rural counties in the analysis were ranked in the bottom quartile of their states for health outcomes, with 41% of people in these counties reporting poor or fair health. One-quarter of the rural counties had a population-to-physician ratio below the state average, which creates barriers to adequate health care. Nearly a third of the rural counties have at some point been designated as medically underserved areas (MUAs), which are geographic areas with a shortage of primary care health services, and 37% had a mental health professional shortage. These analyses are all the more concerning, given data on the spread of COVID-19 in rural areas. All but five of the rural counties had been designated as COVID-19 red zones as of late November, and the vast majority had been red zones for multiple weeks. In light of existing public health challenges and the crises posed by the pandemic, rural counties will rely on anchor institutions like rural public colleges for support. Many rural public colleges educate nurses and people entering necessary healthcare professions, and some have clinics providing free or low-cost care. Rural public colleges have responded to the COVID-19 challenge, providing access to testing and helping to disseminate public health information related to vaccines.



Rural public colleges provide an access point for educational opportunity in rural communities.

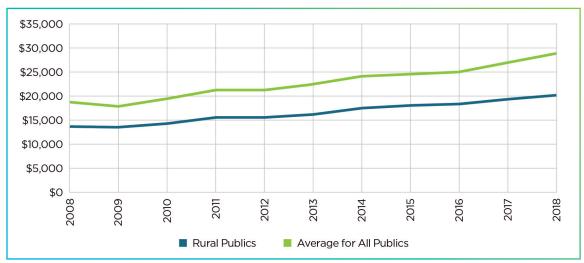
Rural public colleges are a critical player in addressing educational opportunity gaps. most of these institutions have maintained low tuition prices, despite dwindling state funding, and have acceptance rates above 80%, with some employing open enrollment admissions practices. Between 2003 and 2018, enrollment at rural public colleges increased, both in terms of full-time equivalent enrollment and headcount. The latter measure is important because many rural public colleges serve large numbers of students who are pursuing their degree part-time, such as working adults. Rural public colleges also enroll a larger share of students receiving Pell grants, compared to the average for all public institutions. While the majority of students at rural public colleges are white and the percentage of Black students has remained relatively constant, the share of Hispanic/Latinx students has increased, and rural public colleges enroll a large percentage of Native American students. Since 2012, there has been a steady increase in graduate and undergraduate students at rural public colleges who are enrolled in online programs. Many states have set goals to increase postsecondary education attainment, and rural public colleges can help move the dial by providing accessible, affordable, locally-responsive options.



Rural public colleges are underfunded, relative to other public colleges, and need more financial support to serve their communities through COVID-19 and beyond.

Rural public colleges have below-average resources in every revenue category. Prior to the pandemic, rural public colleges were not wealthy, tending to have smaller endowments and lower state funding than research and urban universities. Emerging data suggest that COVID-19 has stressed the finances of rural public colleges, with revenue losses at times representing nearly 10% of institutions' total budget. Most of the colleges were bracing for additional state budget cuts due to projected reductions in state revenues for FY21. As a result of revenue losses, many rural public colleges were cutting spending. In practice, this meant reducing hours for hourly workers, furloughing employees, not filling vacant positions, and laying-off workers. Several institutions were exploring cuts to academic programs and associated faculty members.

Per-student total revenues at rural public colleges consistently lag the national average



Source: Integrated Postsecondary Education Data System

Note: Figures are inflation-adjusted

FEDERAL POLICY SOLUTIONS

The current crisis necessitates federal intervention to support rural public colleges. Most urgently, rural public colleges need federal funding to ensure they can continue serving their students and providing vital services to their communities. To ensure the financial stability of rural public colleges the federal government should:

- Base future stimulus funding on student headcount, not full-time equivalent enrollment.
- Establish federal block grants to states that restore funding for public colleges and universities to pre-2008/Great Recession levels.
- Provide \$1,000 grants to Pell-eligible students attending rural public colleges to purchase laptops and ensure their ability to participate in remote learning.

Beyond the current crisis, the federal government should take the following actions that would ensure the long-term sustainability of rural public colleges and their communities:

- To leverage rural public colleges and improve rural public health: 1) establish teaching health clinics
 and hospitals at rural public colleges; 2) strengthen partnerships with area healthcare providers to train
 healthcare professionals; and 3) provide loan forgiveness for graduates of health science programs
 who work in rural communities.
- To cultivate entrepreneurship and regional economic development: 1) leverage Regional Commissions and 2) modify the Rural Business Development Grant programs to encourage rural public colleges to incubate small businesses.
- To support workforce development: 1) increase funds for the Workforce Opportunity for Rural Communities (WORC) initiative; 2) restore funds for tribal workforce development programs; and 3) establish an AmeriCorps program for nonprofit agencies, public colleges, and government agencies serving rural communities.
- To address regional teacher shortages, adapt the Teacher Education Assistance for College and Higher Education (TEACH) Grant Program to explicitly incentivize teacher education graduates to work in rural schools.
- Establish a federal Rural Serving Institution designation and fund the Higher Education Act Part Q which, provides grants for rural serving colleges and universities.

INTRODUCTION

Although COVID-19 first struck coastal cities such as Seattle and New York, by fall 2020 the virus had reached rural communities and the institutions on which they rely. In early September, cases began exploding in rural communities across the country, with especially worrisome surges in certain counties. As of November, *The New York Times* list of infection "hot spots" included places like Dewey, South Dakota; Toole, Montana; and Childress, Texas—all rural counties. Heading into the winter months, data from the Centers for Disease Control and Prevention showed that COVID-19 cases in non-metropolitan areas exceeded cases in cities and the all-county average.

Observers have warned for months that COVID-19 could devastate rural communities.⁴ This is partly due to health disparities and the prevalence of risk factors among rural people, as well as the financial vulnerability of important public health infrastructure like hospitals and social institutions like public colleges. Rural communities tend to have older populations that are more likely to have chronic health issues.⁵ People in rural communities also suffer from higher rates of underlying conditions known to complicate COVID-19, such as obesity, hypertension, diabetes, and asthma.⁶

When people in rural communities become ill, it can be difficult for them to access healthcare. Poverty rates are higher, and both preventative care and insurance coverage rates are lower among people in rural communities. There are fewer doctors and longer drives to a hospital in the event of an emergency. COVID-19 has intensified the financial challenges of rural hospitals, many of which were already facing acute distress. According to the North Carolina Rural Health Research Program, there have been 174 rural hospital closures since 2005, and 2019 saw a record number of closures. As Senator Dick Durbin noted, when a rural hospital closes, doctors and jobs go with it.

Like hospitals, rural public colleges are vital social institutions, making direct contributions to education, culture, and the economy. Importantly, they are "anchor institutions" for rural communities, meaning they are invested heavily in a place and unlikely to move like some businesses, and they are essential to the wellbeing of their regions. This policy report highlights the importance of 118 public colleges in rural communities (referred to throughout the report as "rural public colleges"), while also demonstrating how COVID-19 threatens their contributions unless policymakers act quickly to support them. The analysis was guided by four questions:

- 1. What are the contributions of rural public colleges to access, equity, and attainment in postsecondary education?
- 2. What role do rural public colleges play in regional workforce development and public health infrastructure?
- 3. How has COVID-19 affected the finances of rural public colleges?
- 4. What federal policy solutions can ensure rural public colleges are appropriately supported?

Prior to the pandemic, rural public colleges faced major challenges. In some cases, population decline in rural communities and competition from colleges with more resources has led to enrollment losses.¹² As a result of decades of per-student state funding cuts, research shows that rural public colleges have significantly less revenue per student than colleges in urban and suburban areas.¹³ And despite the fact that many of the challenges that rural public colleges face were generated by poor policy decisions, several states were nonetheless considering restructuring their public higher education systems to merge or close some of their rural public colleges—a process that would likely involve job losses.¹⁴ Rural public colleges serve students with considerable financial needs.15

The recession "playbook" of responding to state funding cuts by raising tuition is not a viable option for these institutions because it can lead to enrollment losses and an erosion of their educational access missions.¹⁶

COVID-19 has amplified these challenges and hit already-vulnerable rural public colleges hard. Similar to other colleges and universities, rural public colleges have encountered revenue losses from closed or under-utilized residence halls and dining facilities, as well as increased costs to mitigate the spread of the virus.¹⁷ Federal funding provided to higher education institutions through the Coronavirus Aid, Relief, and Economic Security (CARES) Act helped rural public colleges address short-term budget gaps, but the money was insufficient to manage the lingering effects of fighting the pandemic into 2021 and beyond. The coronavirus-relief bill passed in late December of 2020 allocated another \$23 billion to higher education, which is well short of the amount requested by higher education organizations to prevent widespread budget cuts.¹⁸ Many colleges have been forced to eliminate jobs, and The Chronicle of Higher Education reported that, as a sector, higher education has shed at least 10% of its workforce since February.19

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As part of the CARES Act, the U.S. Department of Health and Human Services announced a targeted allocation of \$10 billion specifically to support rural hospitals. The announcement acknowledged that rural hospitals "are more financially exposed

to significant declines in revenue or increases in expenses" and "operate on especially thin margins" compared to urban hospitals.²⁰ The same is true for rural public colleges, which are similarly vulnerable to the effects of COVID-19 and need federal intervention to ensure they continue to serve rural communities. Treating rural public colleges as a type of irreplaceable infrastructure can ensure that people in rural places have the ability to access affordable higher education and graduate with a credential that addresses local workforce needs.

The 118 rural public colleges examiend for this report prioritize college access, particularly for populations that have had difficulty entering and finishing college (see Appendix A for a list of institutions included in the analysis). The primary audiences for the report include: federal policymakers, congressional staff members, state policymakers, non-profit organizations active in higher education, philanthropic organizations active in higher education, college and university government relations officers, and college and university executives.

The report reviews what is currently known about higher education for rural people and places, uses evidence to demonstrate the contributions of rural public colleges to their communities, and examines financial challenges facing rural public colleges due to COVID-19. The report intentionally pairs analysis of quantitative data with institutional profiles and specific examples to go beyond the numbers and bring these important institutions to life. The report concludes with federal policy solutions that will advance and strengthen the significant contributions of rural public colleges in the interest of the communities they serve.

HIGHER EDUCATION FOR RURAL PEOPLE AND PLACES

For decades, people in rural communities have had to overcome significant barriers in a number of important areas, particularly education. Historically, people in rural communities have had lower levels of educational attainment, although marked gains have been made in high school graduation rates over the last several decades.²¹ The puzzle of postsecondary access for rural populations, however, is complex, partly because of the diversity of rural places.²²

One way to approach this puzzle is to develop a more complete understanding of the various forces impacting rural people and places and how these factors influence students' educational pathways. Recent research explained how students' choices about where to attend college are influenced by: 1) the availability of postsecondary options; 2) familial, school, and community influences; and 3) the actions and responses of postsecondary institutions.²³ The same research also noted how a student's ability to send traditional signals of academic ability can be constrained by issues such as limited availability of Advanced Placement courses or dual enrollment opportunities, which are particular issues for rural students. Research has found college options can be limited for Black students in rural communities, and many prefer to stay close to home for college. These individuals also report family support for these aspirations, but students may not have the knowledge needed to prepare for college.²⁴

These factors all affect whether, when, and where rural students attend college. Past research has found that rural students lag behind suburban and urban peers with regard to postsecondary attendance.²⁵ However, other research has found that this pattern may not be universal or driven primarily by rurality itself. Socioeconomic status has been found to be especially influential in rural students' postsecondary pathways. One study found that rural students were more likely to delay college attendance and to not be continuously enrolled, but these disparities were largely explained by differences in socioeconomic status and high school preparation.²⁶ Beyond socioeconomic status, race may also play a role in rural areas

in different ways than in non-rural areas. An examination of community racial composition and college-going rates in Texas uncovered that the proportion of Latinx students among a community's college-going population is smaller than the proportion of Latinx residents in the community's overall population, with this disparity being greatest in rural areas.²⁷

Rural students have a greater likelihood of attending community colleges, but there are other factors that may influence this attendance pattern.²⁸ In one study, advanced math course-taking (or not taking) was a stronger predictor of enrolling (or not enrolling) in college than whether one is from a rural or urban area.²⁹ Geography also appears to shape the choices students make about college. Researchers found that students who desire to remain closer to home often do not attend as selective of an institution as their academic achievement would allow, and this was especially true for low-income students, a phenomenon known as "undermatching."30 Furthermore, their study found that this effect was mitigated for those students who lived within 50 miles of a matching institution. This underscores the idea that proximity to, and availability of, colleges influences students' postsecondary pathways. However, many rural students do not have the same proximity to a variety of higher education options as their urban and suburban peers.

The importance of proximity to college campuses is particularly relevant when thinking about rural public colleges, especially considering that postsecondary education deserts are more prevalent in rural areas.³¹ In a previous study by one of the authors of this analysis, an important finding was that the overwhelming majority of public, bachelor's granting institutions in rural and town settings were baccalaureate institutions and regional public universities.³² These are the institutions that one often envisions when talking about rural public colleges. Less represented in these rural communities are research-intensive universities,

which, on average, have significantly higher endowment assets.³³ As the authors of that study note, this is an important consideration because the resources large research universities possess can build greater capacity to serve students in more robust ways. The relative lack of resources to which rural public colleges have access shapes the academic and co-curricular opportunities that they can offer their students.

However, the body of research on rural-located

and rural-serving postsecondary institutions is limited, which creates challenges when attempting to develop policy interventions that bolster these institutions. While there is limited research focusing on rural, bachelor's-granting institutions, research focused on other education sectors can help to paint a fuller picture. For example, research at the K-12 level shows rural schools are often points of community pride and provide cultural, civic, and economic resources.34 But declining population in some rural communities and lower tax revenues mean rural schools are often underfunded. face teacher shortages, or have been subject to consolidations.35 At the postsecondary level, one study found rural communities rely heavily on their local community colleges, which play multifaceted civic, social, and economic roles. Moreover, growing up near a college led people in rural communities to have significantly different, and more positive, views of local education and employment opportunities.³⁶ Although some rural residents worry postsecondary education will cause young people to leave their communities, having an affordable, accessible college nearby may have the opposite effect and make it possible for them to stay. To help fill these research gaps, this analysis will focus on the contributions rural public colleges make with regard to educational access, economic development, workforce training, and public health, and uses data to identify policy solutions aimed at supporting rural public colleges and the communities that they serve.

APPROACH TO THE ANALYSIS

This report focuses on a group of 118 rural public colleges that prioritize access for students. This access mission is particularly important because institutions dedicated to access are often overlooked and under-resourced compared to institutions that are more selective in their admissions practices. There are no universal definitions or readily available lists of institutions that are "broadly accessible" or "rural," so the research team looked for commonalities in existing research to inform the process of choosing appropriate measures.

The analysis began with public, bachelor's-granting institutions³⁷ in all 50 states with the Carnegie classifications of Baccalaureate (Diverse Fields and Arts & Sciences), Master's Institutions, and Research/Doctoral Institutions.³⁸ Because the report was interested in institutions that had an explicitly localized service area and whose efforts could confidently be connected to rural communities, the analysis excluded institutions with a dominant focus on online-only education (i.e., more than 70% of undergraduates attending exclusively online). Community and technical colleges are also significant to rural communities and their contributions merit attention, but current analysis focuses on bachelor's-granting institutions.

In order to determine which institutions are broadly accessible, the research team looked at existing definitions used in research. Some researchers tied broad accessibility to a single indicator, such as those institutions that admit 80% or more of the students who apply, or considered it to be a function of the institution's original mission (i.e., not a flagship university).³⁹ The research team found these approaches to be insufficient for the purposes of this analysis and developed a novel approach. This approach consisted of using exploratory factor analysis with a large number of variables that are associated with accessibility in admissions and are centered in institutional decision-making around access (e.g., who is admitted,

how much students are charged, what programs are offered)—instead of indicators that are more linked to the outcomes of a broadly accessible institutional mission (e.g., the proportion of low-income students). Factor analysis allowed the research team to produce a single metric out of multiple variables.

This process identified six variables that fell into three broader categories: accessibility in admissions, cost, and inclusive academic offerings. For accessibility in admissions, variables included the admissions rate and the 25th percentile for math standardized test scores. For cost, the variables included in-state tuition and fees and the average price students pay after financial aid. And for inclusive academic program offerings, the variables included whether the institution offers remedial education courses to support underprepared students and whether at least one undergraduate program can be completed completely online. These six variables were combined into a factor score, with institutions above the mean being included in the final group. Institutions listed as having open admissions policies were added to the group of broadly accessible institutions, resulting in a final group of 327 institutions (including rural and non-rural).40

TABLE 1.

The variables used to identify broadly accessible institutions

Accessibility in Admissions

- Admissions rate
- 25th percentile for math standardized test scores

Cost for Students

- In-state tuition and fees
- · Average price students pay after financial aid

Inclusive Academic Programs

- Presence of remedial course offerings to support underprepared students
- Availability of fully online undergraduate degree programs

The next step in the analysis involved exploring the multiple definitions of rural, including county-level Census definitions, definitions from the U.S. Department of Agriculture's Economic Research Service (USDA-ERS), state-level definitions, and institution-level definitions from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS). The IPEDS definition of urbanization (locale) includes four main categories (city, suburb, town, rural) and three subgroups within each category, resulting in 12 groups. The research team compared these different definitions and found considerable consistency between the IPEDS town and rural designations and the other county-based definitions of rural. Ultimately, rural institutions were coded by collapsing the IPEDS urbanization variable, with all town and rural designations coded as rural and all city and suburb designations coded as non-rural.

This process resulted in a final group of 118 rural public colleges (see Appendix A). It is important to note that the definitions in this analysis are tied to metrics that come with their own limitations. There are many institutions that serve a predominantly rural student population but are located in areas that are not coded as rural, and there are many institutions that are deeply committed to facilitating access to higher education, but the data place them outside of the definition of broad access used here. The research team acknowledges that institutions and their stakeholders often have strongly held identities related to what it means to be a rural institution or an institution dedicated to access. The approach used here is not seeking to question or challenge those identities, but rather to utilize data to create a reasonable grouping to advance understanding of rural public colleges.

As Figure 1 shows, the final group includes substantial geographical diversity, and 39 out of 50 states are represented. The group includes eight HistoricallyBlack Colleges and Universities, eight Hispanic-Serving Institutions, one Asian American and Native American Pacific Islander-Serving Institution, and six Native American-Serving Nontribal Institutions. The average headcount enrollment at these institutions was 4,300, but there was a considerable range. Some rural public colleges in our group have headcount enrollments over 20,000 while others have less than 1,000. Irrespective of size, all of these institutions make essential contributions. Most are undergraduate-focused colleges that admit over 80% of applicants and enroll mostly in-state students.

FIGURE 1.Rural public colleges can be found across the United States



Source: Integrated Postsecondary Education Data System

IN FOCUS

Rurality and Postsecondary Education for Native Americans Students

Any study of rural higher education would be incomplete without a meaningful discussion of Native American student populations, Tribal Colleges and Universities (TCUs), and Native American-Serving Nontribal Institutions (NASNTIs). Federal data show that 90% of public, bachelor's-granting TCUs and 88% of broadly accessible NASNTIs are located in rural areas. For this reason, the role of TCUs and NASNTIs in serving Native American students in rural areas merits special focus. The unique governance structures and funding mechanisms of TCUs give reason to take a closer look at their contributions.

There are inherent limitations to discussing Native American-serving institutions and students within a report that is not predominantly focused on Native American education. This report relies on data sources that have not been designed to appropriately acknowledge the unique history of Native American education or the diversity among TCUs (in mission, structure, history, and tribal affiliations). These data also do not allow us to understand the experiences of tribal citizens or the diversity within Native American student populations, as the primary data indicators are embedded in available race and ethnicity categories. This can result in overlooking institutions dedicated to Native American communities and the erasure of Native American students in higher education research. Recognizing these limitations, the research team elected to highlight the special relationship between Native American education and rural communities.

Of the 34 institutions categorized as TCUs through the Carnegie Classification system, 31 are located in areas that fall within the definition of rural used in this report, and most of these institutions are in areas that are considered rural under any definition. Similar to the institutions that are the focus of this report, ten of the 34 TCUs are categorized as public, bachelor's-granting institutions that awarded at least one bachelor's degree in 2018, and all but one (Haskell Indian Nations University) are located in rural areas.

These nine rural TCUs are affiliated with a diverse group of tribal nations, including the Navajo Nation, the Standing Rock Sioux Nation, the Lummi Nation, the Chippewa-Cree Nation, and the Oglala Lakota Nation, and are located in multiple U.S. states (Arizona, New Mexico, Montana, South Dakota, North Dakota, and Washington). Collectively, these institutions enrolled over 6,700 students in 2018, with approximately 90% of students identified as Native American in the federal data. There are connections between the mission of TCUs to engage in Native American nation building and sovereignty and economic development for their associated tribes, and the role of rural public colleges in serving as anchor institutions for their communities. And like rural public colleges, TCUs have faced funding disparities at the federal and state levels.

In addition to the mostly rural-located TCUs, rural communities are home to institutions whose enrollments include a high percentage of Native American students. Although there is not an official designation for nontribal institutions that serve a larger Native American population, the U.S. Department of Education's Native American-Serving Nontribal Institutions (NASNTIs) program offers one lens through which one can identify institutions. Eligibility for this program is limited to institutions that have "an enrollment of undergraduate students

that is at least 10 percent Native American." Combining this enrollment threshold with the criteria in this report (public, bachelor's-granting institutions) resulted in eight institutions that were identified as broadly accessible. Of the eight, all but one is located in rural areas: University of Alaska Southeast; Montana State University - Northern; University of North Carolina at Pembroke; East Central University (OK); Northeastern State University (OK); Rogers State University (OK); and Southeastern Oklahoma State University.

In 2018, these seven rural, broadly accessible institutions enrolled over 30,000 students, of whom over 4,000 are identified as Native American in federal data (although that number is almost certainly an undercount due to how these data are collected). Almost half of Native American students who are enrolled in the public, broadly accessible, bachelor's-granting sector attend institutions located in rural areas, and Native American students enrolled in public, broadly accessible colleges are approximately twice as likely to attend rural institutions than their peers (43% rural vs 21% rural, respectively).

Even within the limitations created by data systems that have a long history of contributing to the erasure of Native American students and education, and a lack of understanding about these communities, it is clear that efforts to improve support of rural higher education must include meaningful collaboration with leaders of tribal nations, national organizations dedicated to Native American education such as The American Indian College Fund and the American Indian Higher Education Consortium, Native American faculty and higher education professionals and students, and the diverse and robust stakeholder community. These stakeholders possess the experience and knowledge needed to inform policymakers about the opportunities and challenges experienced by Native American students in rural communities and the institutions that support their educational pursuits.

FINDINGS

The first step in this analysis was examining communities served by the 118 public colleges identified as rural and broadly accessible. Using county-level data from the American Community Survey, the analysis looked at employment, educational attainment, poverty, and disability rates. Additionally, the analysis examined public health data from the Robert Wood Johnson Foundation's County Health Rankings and Roadmaps, as well as the U.S. Department of Health and Human Services, to understand the public health context and recent COVID-19 metrics. These rural counties were compared to non-rural counties that also had at least one public, broadly accessible bachelor's-granting institution. After examining counties, the next step in this analysis used data from the Integrated Postsecondary Education Data System to capture characteristics of these institutions and their contributions.

The five major findings are:



Rural public colleges sustain local economies and fuel community development;



Rural public colleges provide college-educated workers for high-demand local industries;



Rural public colleges are important partners in building public health infrastructure and battling COVID-19 in rural communities;



Rural public colleges provide an access point for educational opportunity in rural communities; and



Rural public colleges need more financial support to serve their communities through COVID-19 and beyond.

FINDING 1.

Rural public colleges sustain local economies and fuel community development.

Rural public colleges are often important employers in communities where job opportunities can be limited. According to the American Community Survey, low employment counties are those in which less than 65% of residents, aged 25-64. are employed. The analysis found a statistically significant difference in the number of rural counties with a public, broadly accessible college that are designated as low employment versus non-rural counties with a similar institution. Seventeen percent of the rural public colleges were in counties that the Bureau of Labor Statistics designated as low employment, compared to 7% of non-rural counties with a similar institution. This suggests that some rural public colleges serve counties with fewer employment opportunities or counties with more people who struggle to find employment.

The percentage of low employment counties would more than double without the jobs provided by rural public colleges.

On average, the group of rural public colleges employed over 500 people, not including third-party contractors, and it is possible the jobs created by some institutions prevent their counties from being designated as low employment. The analysis found that 19 out of 115 of the counties served by rural public colleges were low employment counties. However, that number would jump to 51 if the jobs provided by rural public colleges were lost, and the percentage of low employment counties would more than double without the jobs provided by rural public colleges. The University of North Carolina at Pembroke (UNCP), profiled below, is the fifth largest employer in Robeson County, providing nearly 1,000 people with jobs in one of North Carolina's poorest counties.

IN FOCUS

University of North Carolina at Pembroke An Irreplaceable Economic Impact

regional income in 2012-13, or the equivalent of 5,171 jobs. Several degree programs demonstrate UNCP's contributions to the region. The bachelor's degree in nursing has a rural case manager concentration, which "prepares nurses to coordinate and implement case management services at the system and community levels to promote quality cost-effective health outcomes for rural populations." Having qualified case managers is especially important to serve large numbers of people using Medicaid in rural areas. The university was awarded a \$3.1 million grant to prepare mental health professionals for work in rural parts of North Carolina. In several healthcare-related degree programs, nearly 80% of graduates work in the region. Beyond economic and degree contributions, UNCP is also home to the Museum of the Southeast American Indian, with exhibits of artifacts, arts, and crafts from Native American communities across the Americas, with an emphasis on the local Lumbee Tribe. The free museum is also a resource for scholarly research and community outreach.

The University of North Carolina at Pembroke (UNCP) was founded in 1887 as Croatan Normal School to train Native American teachers. Between 1939 and 1953, it was the only state-supported four-year college for Native Americans in the U.S. UNCP has continued its tradition of serving students of color and Native American students into the present and has been recognized by *U.S. News and World Report* as the most diverse regional university in the south. UNCP is the fifth largest employer in its county. An economic impact study found that in its service region, UNCP created \$256.3 million in added

UNCP calculated that it created \$256.3 million in regional income in 2012-13, the equivalent of over 5,000 jobs.

To further explore the role of rural public colleges in local employment, the research team looked at two counties that were not designated as low employment: Watauga County in North Carolina and Marquette County in Michigan. In Watauga County, almost 75% of adults are employed. Appalachian State University (ASU), a rural public college, is one of the county's major employers, with 3,217 faculty and staff members. Although not all of these faculty and staff members live in the county, a significant number do and many more county residents rely on the university indirectly for their livelihoods. Using just direct employment of 3,217, ASU is responsible for 19% of the jobs in Watauga County. In a hypothetical scenario in which the jobs provided by ASU were lost, Watauga County's employment rate would drop to 61%, making it a low employment county. In Marquette County, 68% of adults are employed. Northern Michigan University has 1,050 faculty and staff members, representing an estimated 5% of jobs in the county. Without the jobs provided by Northern Michigan University, Marquette County's employment would drop to a level where the county would be designated as low employment.

Data from the U.S. Small Business
Administration indicate that
47% of the rural public colleges
host a small business or technology
development center.

Rural public colleges contribute to community development in other important ways. Many rural public colleges establish centers to support entrepreneurship and small business incubation and provide reskilling opportunities for adults in their communities. The University of Maine at Presque Isle, for example, provides career

resources for adults in the region through the New Ventures Maine Initiative, which offers free classes and workshops for adults and one-on-one training. Data from the U.S. Small Business Administration indicate that 47% of the rural public colleges host a small business or technology development center. These centers are important because rural communities have higher per-capita self-employed business rates than urban communities—an economic strength too often ignored.47 That said, the pandemic has wreaked havoc on small businesses, and nearly 132,735 have closed as of September, 2020.

Using data from the Institute of Museum and Library Services, the analysis found that 64% of the rural public colleges hosted a museum. Combined with the concerts, theatrical productions, lectures, and other events commonly organized on college campuses, these museums illustrate the cultural contributions of rural public colleges to their communities. One function of these efforts is to celebrate and preserve rural customs and lifeways. For example, the profile for the University of North Carolina at Pembroke notes that the institution is home to the Museum of the Southeast American Indian, which includes artifacts, arts, and crafts from Indigenous communities all over the Americas, with an emphasis on the local Lumbee Tribe. In some cases, rural communities are far away from cities where museums and performances may be more readily available. Some of the rural public colleges hosted the only museums in their counties. Museums and events can attract visitors and benefit local businesses while also providing arts and culture programming for residents who may not have means to travel to cities to enjoy such offerings. Alternatively, the absence of these offerings, such as when campuses temporarily closed due to the pandemic, can have dire implications for small rural towns that are synergistically connected to a college.

IN FOCUS

University of Maine at Presque Isle A Hub for Community Development

The University of Maine at Presque Isle
(UMPI) was founded in 1903 as Aroostook
State Normal School to educate school teachers.
UMPI'smission is to: "inspire learners from near and far,of all ages and career stages, and support their personal journeys toward the future they seek" and is recognized as one of the most affordable universities in the Northeast, maintaining a "Free for Four" program that gives full tuition and fees for Pell-eligible Mainers. UMPI has a personalized learning curriculum that is competency and outcome based and highly responsive to individual learner needs and experiences.

UMPI demonstrates its regional service mission by hosting a large number of partnerships with community leaders and organizations that are coordinated by the Houlton Higher Education Center. One example of these partnerships is the Maine Military and Community Network which acts as a resource hubfor active service members, veterans, and their families. The center also provides career training for local residents and has supported revitalization efforts for Presque Isle's downtown. UMPI is an important career resource for adults in the region through the New Ventures Maine Initiative, which offers free classes and workshops for adults and one-on-one training.

UMPI maintains a close partnership with the Aroostook Council on Education and supports local superintendents in strengthening community relationships, sharing resources, and attaining grants. The UMPI GIS Laboratory strengthens the geospatial capabilities of its region which supports area community development efforts. In 2018, UMPI launched an agricultural science degree which is intended to strengthen connections to local agricultural research and business to address agricultural issues facing the region.



FINDING 2.

Rural public colleges provide college-educated workers for high-demand local industries.

In addition to often being their region's largest employer, rural public colleges contribute significantly to the local workforce, aligning their degree and certificate offerings with high-demand industries. As shown in Figures 2 and 3, rural public colleges have remained focused on undergraduate education, increasing the number of bachelor's degrees awarded per year, as well as the number of associate's degrees and certificates.

FIGURE 2.

Rural public colleges have increased bachelor's degrees awarded per year

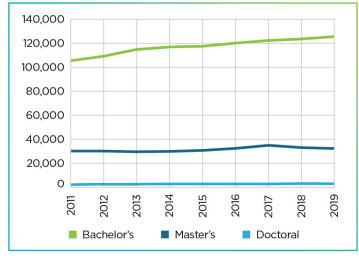


FIGURE 3.

Rural public colleges have increased certificates and associate's degrees awarded per year



Source: Integrated Postsecondary Education Data System

While no two rural communities have the same economic composition, the major industries in rural communities across the United States include hospitality and tourism; resource management and extraction; health professions; small business ownership; and education.⁴⁸ Figure 4 shows that the top ten degrees produced by rural public colleges reflect these industries. with business, health professions, and education occupying the top three spots. Rural public colleges produced 16,248 degrees in health professions and related programs including 9,662 nursing degrees, 13,067 teaching certificates, and 6,573 degrees in homeland security, law enforcement, firefighting, and related protective services in 2019. Research shows shortages of nurses, teachers, and police officers in some rural areas, making the work of rural public colleges in educating people in these degrees all the more important.⁴⁹

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Eastern Kentucky University Degrees Meeting Local Needs

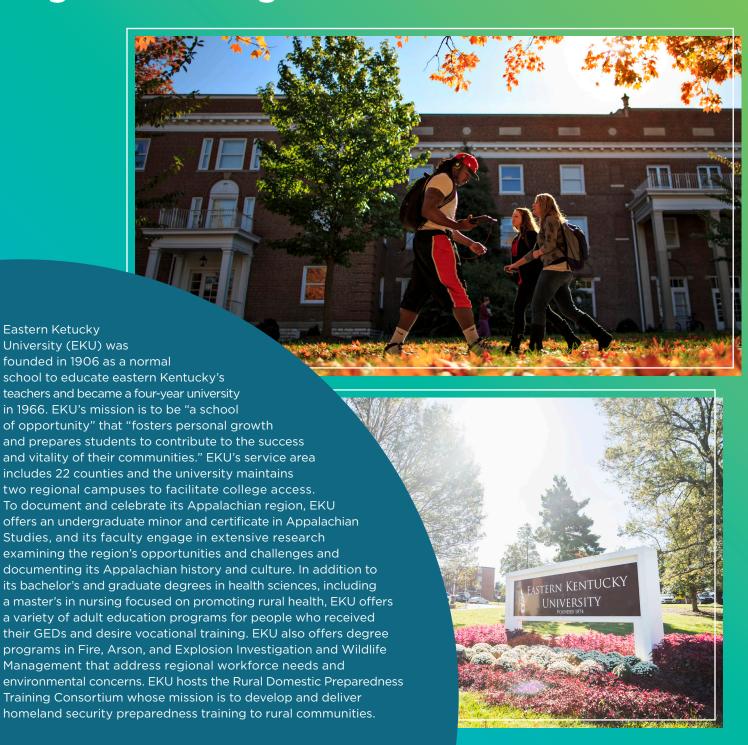


FIGURE 4.

Top degrees at rural public universities reflect major industries in rural areas



Source: Integrated Postsecondary Education Data System

Many rural communities are rich in natural resources and have robust tourism and natural resource management sectors. A recent Brookings Institution report found that "of the 121 U.S. counties with more than a fifth of their workforce in hospitality. 89 are rural areas."50 Rural public colleges produced 5,261 degrees in parks, recreation, leisure, and fitness management in 2019. Eastern Kentucky University (EKU), profiled below, exemplifies how these institutions address critical workforce needs. EKU offers a range of bachelor's and graduate degrees in health sciences, including a master's in nursing focused on promoting rural health, as well as degree programs in fire, arson, and explosion investigation and wildlife management. As was discussed, rural communities are also hubs of entrepreneurship and small business ownership, and rural public colleges graduated 24,635 business majors in 2019.

FINDING 3.

Rural public colleges are important partners in building public health infrastructure and battling COVID-19 in rural communities.

Some rural public colleges are located in counties with acute healthcare needs. The County Health Rankings and Roadmaps, a program of the Robert Wood Johnson Foundation, provides annual, county-level rankings for health outcomes based on factors like length of life, quality of life, and quality of healthcare. Roughly one-quarter of the rural counties were ranked in the bottom quartile in their state for health outcomes. One measure included in the rankings is the percentage of people reporting poor or fair health, and 41% of the rural counties fell below the state average in this measure. However, it is worth noting that a significant number of the rural counties (40%) were in the top quartile. Although many of the counties struggled with poor health outcomes, this is not universally true of rural counties.

The analysis additionally found that about one-quarter of the rural counties had a population-to-physician ratio below their state's average. This suggests that some of these counties may have a shortage of physicians or health professionals, creating barriers to adequate healthcare and indicating a need for healthcare workers. This is corroborated by data from the U.S. Department of Health and Human Services showing that slightly less than one-third of the rural counties have at some point been designated as medically underserved areas (MUAs). MUAs are geographic areas with a shortage of primary care health services. The count of MUAs may be an underestimate because the analysis did not include multi-county service areas and census tracts, which are also eligible for the designation. An even larger percentage (37%) of counties were designated as having a mental health professional shortage. As was true with health outcomes rankings, some of the rural counties did well with respect to the number of primary care physicians. For example, Ohio County, West Virginia includes the city of Wheeling and recorded the lowest population-to-physician

ratio at 627 to 1. By contrast, Marshall County in the northwest corner of Minnesota had a population-to-physician ratio of 9,356 to 1.

These analyses are all the more concerning, given data on the spread of COVID-19 in rural areas. According to the White House Coronavirus Task Force, a red zone is an area experiencing more than 100 new cases per 100,000 people in the last week. All but five of the rural counties—or 96% of the counties—were designated as COVID-19 red zones as of late November, and the vast majority had been red zones for multiple weeks. And while communities of all sizes are struggling to contain this latest outbreak, data increasingly indicate that the current surge of the virus is disproportionately hurting people in rural communities. Recent data from the Centers for Disease Control and Prevention show that people in rural areas are dying at a rate nearly 2.5 times higher than those living in cities.⁵¹

All but five of the rural counties—or 96% of the counties—were designated as COVID-19 red zones as of late November, and the vast majority had been red zones for multiple weeks.

Given existing public health challenges and the crises posed by the pandemic, rural counties will rely on anchor institutions like public colleges for support. As discussed above, many rural public colleges educate nurses and people entering important health professions. The jobs created by rural public colleges provide stable benefits, and some colleges host clinics providing free or low-cost care. Furthermore, the analysis found that five rural public colleges have a college of medicine and another 12 have partnerships with colleges of medicine at other institutions. Nearly all of these programs have tracks,

scholarships, or initiatives to increase the number of doctors in rural areas. Both UNCP and EKU have health sciences degrees specifically designed to serve rural communities. These contributions are particularly salient, given data showing many states and hospitals are facing staff shortages.⁵² Still other rural public colleges have responded to the COVID-19 challenge, providing access to testing and helping to disseminate public health information. UNCP has been integral in helping with testing and vaccine hesitancy research and recently acquired a mobile clinic to support the COVID-19 response of nearby counties.

TABLE 2.

Some rural public colleges are located in counties with acute public health needs

	Number of Counties	Percentage of Counties
Ranked in Bottom Quartile for Health Outcomes	29	25%
Federally-Designated as Medically Underserved	35	30%
Federally-Designated as Mental Health	44	37%
Professional Shortage Area		
COVID-19 Red Zone	113	96%
Population-to-Physician Ratio Below	29	25%
State Average		
Percent of Population Reporting Poor/Fair	48	41%
Health Above State Average		

Source: County Health Rankings and Roadmaps; U.S. Department of Health and Human Services; White House Coronavirus Task Force

FINDING 4.

Rural public colleges provide an access point for educational opportunity in rural communities.

As discussed above, accessing and finishing college can be a daunting undertaking for people in rural communities. Many rural students graduate from high school and enter college at rates similar to students in urban areas. But issues arise when it comes to college completion. According to the American Community Survey, low education counties are those in which 20% or more of residents do

IN FOCUS

Eastern Oregon University A Rural Access Point

In 2018, the Oregon state legislature unanimously passed a resolution naming Eastern Oregon University (EOU) the state's official "rural university." The designation was partly designed to affirm EOU's role in the state and distinct mission. Founded in 1929 as a teachers' college, EOU's mission is to "serve as the educational, economic, and cultural engine for rural places." Several initiatives at EOU demonstrate this mission. In the bachelor's degree in Sustainable Rural Systems, students learn about the unique nature of rural societies, environments, and economies. The program uses a project-based learning model in which students become project managers, doing ecological and industrial restoration work that engages communities and industry partners. Another initiative is the Greater Oregon STEM Hub, which brings STEM education to rural K-12 students. The STEM Hub received a grant to construct and distribute 2,000 at-home STEM kits to fourth graders in counties where schools closed due to high COVID-19 rates. The Rural Engagement and Vitality Center aims to develop tomorrow's rural workforce and leaders through partnerships between EOU and entities in eastern Oregon. One of EOU's goals has been to facilitate transfer for students from community colleges and improve their retention and completion rates. EOU established 11 regional centers, including several at community colleges with which EOU has transfer agreements, to provide admissions, academic advising, and support services for online and onsite students. EOU is also home to the oldest Native American student group in the West, Speel-Ya. As a testament

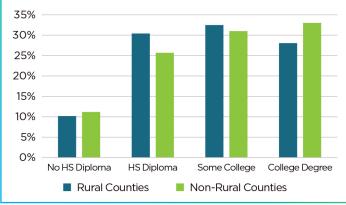


not have a high school diploma or equivalent. The difference in the number of low education counties in the rural versus non-rural counties was not statistically significant. Only 3% of the rural counties were designated as low education, compared to 5% of the non-rural counties.

However, as Figure 5 shows, the rural counties had a lower percentage of residents with college degrees (these data do not allow for tracking of residents with certificates). As noted above, this difference in postsecondary attainment could be due to rural residents having fewer postsecondary education options, as well as other factors like higher poverty rates. In the rural counties, 18% of residents live at or below the poverty line compared to 14% in the non-rural counties. This suggests rural public colleges may }be serving larger shares of students with higher financial needs.

FIGURE 5.

Rural counties had a lower percentage of residents with college degrees



Source: American Community Survey

Rural public colleges play an important role in addressing postsecondary education opportunity gaps. These institutions have a mission of facilitating access to postsecondary education through low barriers to entry and affordability. For example, this group of rural public colleges has maintained low tuition prices, despite dwindling state funding. Additionally, these colleges accept far more students

than they reject. On average, the rural public colleges have an acceptance rate above 80% and some are open enrollment. In contrast to some colleges that compete to become more selective, research shows that many broadly accessible institutions have actually increased their acceptance rates over time.⁵³

A prominent theme in media reporting about rural public colleges is that they are shrinking in size, partly due to the depopulation of rural areas.⁵⁴ Contrary to these narratives, this analysis found that between 2003 and 2018, enrollment at the rural public colleges increased, both in terms of full-time equivalent enrollment and headcount (Figure 6). The latter measure is important because many rural public colleges serve students who are pursuing their degree part-time, such as working adults.

It is important to recognize that enrollment growth is not a universal trend at these institutions. In fact, some public rural colleges are experiencing enrollment losses, while others remain steady. Part of this variation can be attributed to regional population trends, with some regions of the U.S. seeing population decreases that can impact college enrollments.55 Apart from regional demographics, students' college choices may also be influenced by the natural amenities of surrounding area,56 as well as by large and successful collegiate athletics programs.⁵⁷ Enrollment in higher education is usually countercyclical: during recessions, enrollment tends to increase (potentially contributing to the enrollment bump between 2008 and 2010) and it tends to decrease when the economy is healthier (as was the case in the second half of the 2010s).

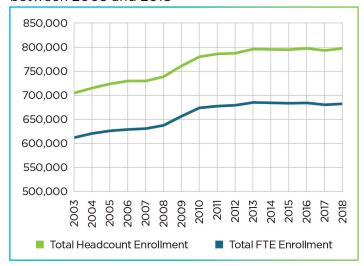
IN FOCUS

Adams State University Rural and Hispanic-Serving

(ASU) is located in an area of southern Colorado that is home to the Great Sand Dunes National Park and a thriving Latinx community with families who have lived on these lands long before it was part of the United States. ASU was founded in 1921 as a normal school to train teachers for the remote, rural San Luis Valley (SLV). ASU's mission is to "provide equitable access to education for all" and to draw "on its rural location in the San Luis Valley to serve and empower all students." ASU was the first Colorado campus to be designated as a Hispanic Serving Institution (HSI), with 38% of its undergraduate degree-seeking students who are Latinx, nearly 50% of students who are first-generation, and over 70% who are Pell eligible, which makes its status as Colorado's most affordable four-year institutions highly important. ASU also maintains a special scholarship program called the "SLV Promise" that guarantees tuition and fees will be covered for Pell-eligible students from the valley ASU's access mission extends beyond its on-campus and online programs as it offers students in prisons correspondence degree programs and is the only postsecondary institution in the nation to offer a Master's degree to students who are incarcerated. In a 2018 economic impact study, it was found that ASU contributes \$83.5 million to the SLV economy and is one of the region's largest employers. ASU proudly honors its responsibility as a steward of place through place-based initiatives that partner with area business, education, and civic leaders to address the challenges and opportunities facing the region including a program funded by the Elementary and Secondary Education Act to address teacher shortages and a USDA-funded program to support disadvantaged farmers and ranchers. ASU also offers a number of pre-health degree programs with high acceptance rates into medical, veterinary, and dental schools and a food studies degree focused on sustaining food systems in its region. ASU remains an important incubator of education talent and has a teacher education program focused on training teachers for rural communities which has educated 73% of teachers and administrators in its region.

Adams State University

FIGURE 6.
Rural public colleges' enrollment grew between 2003 and 2018

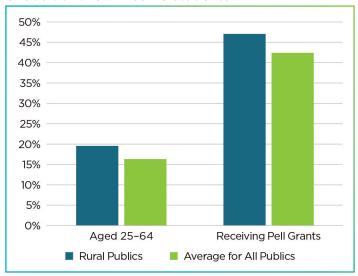


Source: Integrated Postsecondary Education Data System

Rural public colleges also serve student populations that have been underserved by more selective institutions. As seen in Figure 7, these colleges enroll larger shares of adult students, as well as students receiving Pell grants, compared to all public, four-vear institutions. Because rural areas have had to overcome structural barriers that hindered postsecondary attendance and attainment, it is not surprising that these institutions are serving greater proportions of students who rely on need-based grant aid or those who pursue a postsecondary education later in life. As the nation continues to strive for increased college completion rates, it will be critical to support the institutions with experience serving larger proportions of students from these populations.

FIGURE 7.

Rural public colleges enroll above-average shares of adult and low-income students

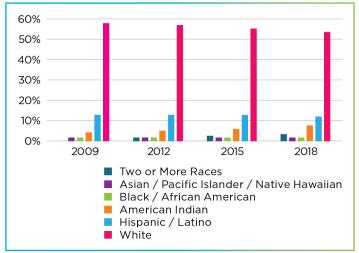


Source: Integrated Postsecondary Education Data System

The racial demographics of rural public colleges highlight institutions whose student bodies are changing. As can be seen from Figure 8, the majority of students at rural public colleges are white. However, the share of white students has declined over time. The percentage of Black students has remained relatively constant, but the share of Hispanic/Latinx students has increased. This latter finding is likely driven, in part, by the fact that the rural Latinx population grew by 50% between 2000 and 2010.58 Given the regional focus of these colleges, the racial demographics at each campus are likely more reflective of the demographics of its local area. However, particular attention must be paid to Native American student enrollments and rural public colleges (see "Rurality and Postsecondary Education for Native American Students").

FIGURE 8.

The share of white students at rural public colleges is declining



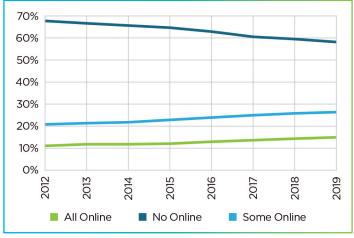
Source: Integrated Postsecondary Education Data System

As many institutions closed or reduced in-person instruction due to COVID-19, online education has become critically important to operations and ensuring students are able to continue their education remotely. Even prior to the pandemic, delivering educational offerings in online or hybrid formats was a part of executing an accessible, regional service mission, particularly for colleges that served rural populations that were often separated from the campus by considerable distances. Figure 9 shows that, since 2012, there has been an increase in the percentage of undergraduates at rural public colleges who were enrolled in programs that are partially or entirely online.

However, this should not suggest that online education provision is a silver bullet solution to rural college access challenges, as there are still significant barriers that exist for rural students wishing to participate in high-quality online education.

FIGURE 9.

Rural public colleges have increased the share of undergraduates enrolled in online programs



Source: Integrated Postsecondary Education Data System

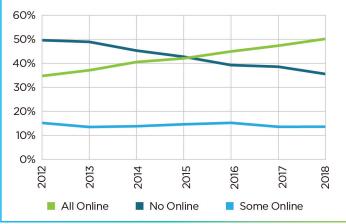
Online enrollments for graduate students at these institutions, on the other hand, have increased at a much steeper rate over the same time period. As highlighted in Figure 10, the share of graduate students enrolled in entirely online programs has increased by roughly 15 percentage points, from 35% to 50%, over a six-year period. Unlike with undergraduate students, there is no corresponding increase in the share of graduate students enrolled in hybrid programs. Rather, this proportion has remained fairly static, with only a very slight decline since 2012. While the data do not allow for the disaggregation of online students by home county, it can be safely assumed that the growth in fully online programs expands the reach of rural public colleges and opens them to new recruitment markets. Concordantly, this broadens the service regions and accessibility of these rural public colleges in a manner that further magnifies their critical role.

However, this should not suggest that online education provision is a silver bullet solution to rural college access challenges, as there are still significant barriers that exist for rural students wishing to participate in high-quality online education.⁵⁹ Of these barriers, the accessibility and affordability of broadband internet service in ru-

ral areas is among the most significant, as the lack thereof can create "complete education deserts" lacking physical and online access to postsecondary education opportunities. 60 Rural broadband access will be discussed in further detail in the recommendations section.

FIGURE 10.

Rural public colleges have substantially increased online graduate education



Source: Integrated Postsecondary Education Data System

Rural public colleges are often operating on a shoestring budget.

FINDING 5.

Rural public colleges need more financial support to serve their communities through COVID-19 and beyond.

Rural public colleges are often operating on a shoestring budget. They have fewer resources than similar institutions in non-rural areas, and their revenues in all major categories are below the average for public universities. COVID-19 has hit institutions that have a thin financial cushion and led to financial losses in multiple revenue sources. These losses have prompted cuts to personnel and programs that will only widen educational, health, and economic opportunity gaps between rural and non-rural areas.

Prior to the pandemic, rural public colleges were not wealthy institutions. Research has demonstrated that both regional colleges and rural public colleges generate less revenue per student than urban and larger universities. Moreover, regional colleges rely heavily on state appropriations and tuition revenue, and they cannot easily address cuts in those revenues using other sources, such as private gifts or grants. The finance metrics included in Table 3 are all reported per student using headcount and have been adjusted for inflation.

TABLE 3.

Rural public colleges depend on state funding, yet appropriations are below-average

	200	80	20 1	3	2018		
Rural Public Colleges	Per Student	% of Total	Per Student	% of Total	Per Student	% of Total	
Total Revenue	\$13,910		\$16,360		\$20,315		
Tuition and Fees	\$2,968	21%	\$4,154	25%	\$5,041	25%	
State Appropriations	\$4,938	35%	\$,4693	29%	\$5,824	29%	
Auxiliary Revenue	\$1,617	12%	\$1,944	12%	\$2,270	11%	
Average for All Public Institu- tions	Per Student	% of Total	Per Student	% of Total	Per Student	% of Total	
Total Revenue	\$18,837		\$22,634		\$28,981		
Tuition and Fees	\$4,043	21%	\$5,829	26%	\$7,161	25%	
State Appropriations	\$5,501	29%	\$5,019	22%	\$6,583	23%	
Auxiliary Revenue	\$1,929	10%	\$2,420	11%	\$2,974	10%	

Source: Integrated Postsecondary Education Data System

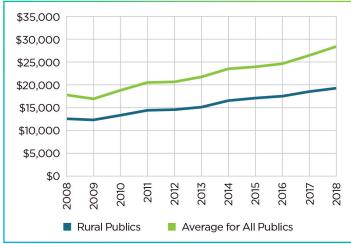
Note: Figures are inflation-adjusted

Figure 11 shows that rural public colleges saw modestly increasing per-student total revenues from 2008 to 2018. Average total revenues at rural public colleges were \$13,910 in 2008, then increased to \$20,315 in 2018. The rural public colleges saw less total revenues per student on average compared to the average for all public

institutions. By 2018, the average per-student total revenues were more than \$8,000 higher at public institutions nationwide than the average for rural public colleges. Consistent with other research on rural-serving postsecondary institutions, these results show rural public colleges are operating with fewer resources than many other public institutions. This means that these institutions have to stretch their limited resources far in order to effectively serve rural students and communities. Moreover, it suggests that rural public colleges may have fewer resources to support their students and communities in the event of a sudden budget crisis, such as the one perpetuated by COVID-19.

FIGURE 11.

Per-student total revenues at rural public colleges consistently lag the national average



Source: Integrated Postsecondary Education Data System Note: Figures are inflation-adjusted

Rural public colleges earned approximately \$2,000 less per student in tuition revenue on average compared to the average for all public institutions.

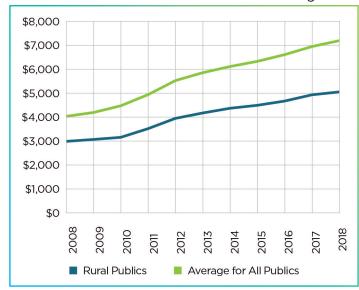
The pattern described above for total revenues holds across several of the primary revenue categories for colleges. In 2018, rural public colleges generated on average \$5,041 per student in tuition

revenue, up from an average of \$2,968 per student in 2008 (Figure 12). Even with these increases, rural public colleges earned less tuition income than the average for all public universities, and the disparity grew between 2008 and 2018. As of 2018, rural public colleges earned approximately \$2,000 less per student in tuition revenue on average compared to the average for all public institutions. Tuition revenue at rural public colleges also grew at a slower rate than the national average.

Table 3 shows that net tuition revenue as a share of total revenues at rural public colleges increased during this time period from 21% to 25%. One reason why the rural public colleges earn less from net tuition revenue is that many of them charge low tuition prices in an effort to be accessible to the students they serve. Some research also suggests that rural students have lower household incomes compared to urban students, meaning there are relatively fewer students at rural public colleges paying full price and a larger share of students relying on financial aid to attend.

FIGURE 12.

Rural public colleges earned less per student in net tuition revenue than the national average

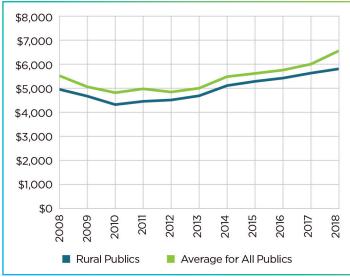


Source: Integrated Postsecondary Education Data System Note: Figures are inflation-adjusted

In 2018, rural public colleges received less in average per-student state appropriations compared to the average for all public institutions (Figure 13). The trend line indicates that all public institutions experienced declining per-student state appropriations from 2008 until 2010, slowly returning to 2008 levels around 2014. Table 3 demonstrates that, measured as a share of total revenues, average per-student state appropriations decreased at rural public colleges from 35% in 2008 to 29% of total revenues in 2018. These findings corroborate prior research showing that regional and rural colleges receive less in state funding than larger and more urban institutions and show that the way that states fund postsecondary institutions may disadvantage rural public colleges.63

FIGURE 13.

Rural public colleges received less per student in state appropriations than the national average



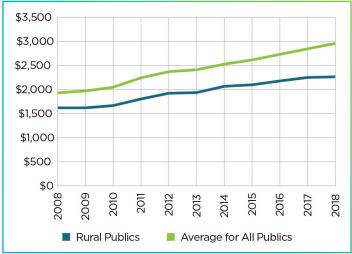
Source: Integrated Postsecondary Education Data System Note: Figures are inflation-adjusted

Auxiliary services revenue includes income from fees collected for residence halls, dining centers, bookstores, conferences, and so forth. Rural public colleges, on average, generated less average per-student revenue from auxiliary services than the average for all public institutions between 2008 and 2018 (Figure 14). Moreover, the share of total revenues from auxiliary services has

remained relatively flat at rural public colleges. However, the 10% of total revenues from auxiliary services matters because COVID-19 has dramatically impacted that revenue source, often introducing a major budget hole these colleges have had to address.

FIGURE 14.

Rural public colleges' per-student revenue from auxiliary services was below-average



Source: Integrated Postsecondary Education Data System Note: Figures are inflation-adjusted

Finance data for fiscal year 2020-21 (FY21) is not available through government datasets like IPEDS. Nevertheless, this analysis sought up-to-date financial impacts of COVID-19 on institutions. The research team searched publicly available documents for a subset of institutions to understand revenue losses and institutional responses due to the pandemic (Table 4).

Emerging data suggest that COVID-19 has stressed the finances of rural public colleges, with all but one of the 14 rural public colleges reported in Table 4 showing revenue losses. In some cases, revenue losses represented nearly 10% of institutions' total budget. All the rural public colleges reported revenue losses in multiple categories even after receiving money from the CARES Act. The most common revenue loss category was revenue from auxiliary services, with every institution reporting losses in this area. Most of the institutions also

reported losses in tuition revenue, followed by state funding. Most were bracing for additional state budget cuts, with all but one of the states in which these colleges were located projecting revenue decreases for FY21.

TABLE 4.COVID-19 has stressed the finances of rural public colleges

	Estimated Change in Revenue		Sources of Institutional Revenue Loss (Reported as of November 2020)					Selected Institutional Response (Reported as of November 2020)			
Institution		% of Total Budget	Tuition and Fees	State Funding	Auxiliary Revenue	Other	FY21 State Revenue Outlook	Personnel Cuts	Changes to Academic Programs	Furloughs or Pay Reductions	CARES Funding
University of Mississippi			V	V	V		•			V	\$8.3 mi
Oklahoma State University - Main Campus	- \$3.7 mil	-2%	~	~	~		•	~		~	\$8.3 mil
Glenville State College	+\$60,294	0.2%	~		~		•	~		~	\$1.9 mil
University of Maine at Fort Kent	- \$1.5 mil	-9%	~		~		•				\$0.3 mi
University of Wisconsin-Whitewater	- \$9 mil	-8.9%	~	~	~		A	~		~	\$4.1 mil
Montana State University	-\$10 mil	-4.6%	~		~		•	~	~	~	\$5.3 mi
Sul Ross State University	-\$2.9 mil	-8.4%	~	~	~		•				\$0.9 mi
University of North Georgia	-\$8.8 mil	4.8%	~	~	~	~	•			~	\$6.8 mi
University of Nebraska at Kearney	- \$8.6 mil	-5%	~		~	~	•	~		~	\$1.9 mil
Ferris State University	- \$7.3 mil	-3.5%	~	~	~		•	~	~	~	\$4.6 mi
Eastern Kentucky University	- \$19.2 mil	-7.9%	~	~	~		•	~	~	~	\$5.3 mil
University of Alaska Southeast	- \$1.9 mil	-8.2%	~	~	~		•	~	~	~	\$0.2 mi
University of Arkansas at Monticello	- \$1.8 mil	-9.1%	~	~	~	~	•	~			\$1.6 mil
Emporia State University	-\$6.5 mil	-6.6%	~	V	V		•	~	~	'	\$1.8 mil

Source U.S. Department of Education; New America, "The Impact of COVID-19 on State Higher Education Budgets"; Institutional Websites

As a result of revenue losses, many of the rural public colleges reported efforts to quickly cut spending. In practice, this meant reducing hours for hourly workers, furloughing employees, not filling vacant positions, and laying-off workers. At least one institution was already exploring cuts to academic programs and associated faculty members. Significant revenue and job losses underscore the importance of additional federal support to ensure these schools can fulfill their missions and serve as economic bedrocks for rural communities.

FEDERAL POLICY SOLUTIONS

Rural public colleges are vital anchor institutions that provide access to college, train teachers and health professionals, upskill adults, incubate small businesses, and employ significant proportions of individuals in their regions. These are not ivory towers-rural public colleges are totally enmeshed in the lives of their communities. Any closures or severe budget cuts would not only close the door to college for many rural Americans but would have cascading negative impacts that will exacerbate economic, health, and educational disparities in rural communities. State budgets have been strained due to COVID-19 as governors navigate the pandemic while providing essential services including public health, K-12 education, and corrections. These budget constraints have led to severe cuts to higher education funding in many states. Federal policy intervention is imperative to ensure rural public colleges can continue serving their regions.

These are not ivory towers—rural public colleges are totally enmeshed in the lives of their communities.

The policy solutions that follow build on this report's findings and leverage existing federal agencies and regional and rural development initiatives to ensure rural public colleges can continue serving as anchors for their communities. These solutions protect the short-term viability of rural public colleges and strengthen their sustainability into the future and are offered as a general framework for federal action. That said, the diversity of rural communities will require flexible and tailored policy solutions depending on regional context.

SHORT-TERM POLICY SOLUTIONS: ENSURE THE IMMEDIATE VIABILITY OF RURAL PUBLIC COLLEGES

Base Stimulus Funding on Headcount Enrollment. Rural public colleges urgently need additional stimulus funding to ensure they can continue providing education to their communities and vital regional services. In the CARES Act, funding for colleges was based on full-time equivalent enrollment, and in the Consolidated Appropriations Act, funding was based on a mix of full-time equivalent enrollment and headcount. Future stimulus funding for higher education should be based on headcount solely, as this report shows many rural Americans attend college or pursue credentials and continuing education part-time. Providing funding to colleges based on headcount will remedy funding inequities.

Establish Federal Block Grants to States. Given that states have slashed funding to colleges and universities in the pandemic-induced recession, and higher education is often the balance wheel for state budgets because funding for the system is not constitutionally-mandated, federal intervention is needed to ensure the short-time financial stability of rural public colleges. The federal government should establish block grants for states to restore funding to public colleges and universities. The block grants should restore funding to pre-2008 levels, the period before the Great Recession, as funding for public higher education has never been fully restored since. The federal government should award block grants to states contingent

on their commitment to restore funding to public colleges and universities to pre-2008 levels after the current crisis ends.

Establish Paycheck Protection Program for Rural Public Colleges. This report surfaced the crucial economic role rural public colleges play in their communities. As is clear from the Wautauga County example, if Appalachian State University ceased to exist, so would jobs for thousands of people in that community. Yet enrollment fluctuations and reduced campus operations have changed staffing needs during the pandemic, leading some rural public colleges to implement furloughs and layoffs which will increase poverty and joblessness in rural communities. The federal government should establish a federal higher education paycheck protection program and model this program after the one offered by the Small Business Administration. Such a program would prevent people from losing their incomes and benefits and ensure that once the pandemic ends, they will have a place to return to work. Loan forgiveness should be offered for rural public colleges taking advantage of such a program.

Tribal College and University Funding.

Tribal Colleges and Universities (TCUs) are vital rural postsecondary access points for Native American and rural communities yet are often unfunded by states even as they enroll both tribally-enrolled students and state residents who are not Native American or tribally affiliated. Federal funding for TCUs is given per Native American student who is tribally-enrolled and not for Native American students who are not tribally-enrolled or non-Native American state residents. Federal funding for TCUs should be based on headcount regardless of tribal affiliation. Currently TCUs do not receive the full funding authorized to them by the Tribally Controlled College or University Assistance Act of 1978. The federal government should act to fully fund TCUs in accordance with this act.

Grants to Improve Student Access to Technology and Broadband Internet. The pandemic has demonstrated in no uncertain terms the dire need Americans have for access to reliable broadband internet, yet rural communities have been left behind and lack access to this vital utility. As rural public colleges pivot to online instruction and student services, students have increased technological needs. The Consolidated Appropriations Act provides funding for Pell recipients to receive discounted broadband internet which is a step in the right direction, yet many rural college students lack computers or access to reliable internet. The federal government should award \$1,000 grants to Pell recipients attending rural public colleges to purchase computers or laptops.

Currently the federal government uses a patchwork approach to address disparities in broadband access in rural communities. The Consolidated Appropriations Act allocated funding to provide broadband internet to rural and tribal areas and map the country to identify areas without broadband access. While these are positive developments, the federal government should establish an oversight committee that spans federal agencies to audit and assess current broadband access programs and upscale and coordinate the federal approach to addressing the rural digital divide. Such actions would bring rural communities, rural public colleges, and rural Americans online. Additionally, the Federal Communications Commission should modify its E-Rate program which provides discounted internet to secondary and primary schools and libraries to make rural public colleges eligible for participation. Public colleges and universities with high Pell enrollments that are located in rural communities should receive higher discounts.

LONG-TERM POLICY SOLUTIONS: STRENGTHEN THE SUSTAINABILITY OF RURAL PUBLIC COLLEGES

Leveraging Rural Public Colleges to Improve Rural Public Health

<u>Incentivize cooperative partnerships between</u> rural hospitals, clinics, and rural public colleges. Rural communities face shortages of health care and mental health professionals, and often lack hospitals or health clinics. As this report found, many rural public colleges offer health science degrees and some even host health clinics. In communities with hospitals or urgent care facilities and rural public colleges, the federal government should incentivize partnerships between these anchor institutions to increase the supply of public health workers and access to health care services. Such partnerships would create internship programs for students in health science degree programs and encourage people from rural communities to pursue careers in health professions.

Regional Commissions established by the federal government (e.g., Appalachian Regional Commission, Delta Regional Authority, Denali Commission, etc.) should serve as localized coordinators that provide incentives tailored to the unique needs of their regions. Incentive programs could include grants made available to cooperative partnerships that would address acute public health needs and fund paid internships for students pursuing health science degrees. An example program is the Appalachian Regional Commission's Excel Nurses Assistant Program which increases health care capacity in Mississippi by funding the professional supplies, background screenings, and other resources required by Itawamba Community College students studying nursing. Programs like this should be scaled up and offered across Regional Commissions in partnership with rural public colleges.

Establish funding for rural public colleges to establish teaching health clinics and hospitals. In communities lacking hospitals or public health clinics,

the federal government should provide funding to rural public colleges to establish teaching health clinics and hospitals. The Federally Qualified Health Centers Program could collaborate with rural public colleges to develop these clinics. Not only would better coordination address disparities in access to health care facilities faced by rural Americans, it would also create jobs for educated health care talent which would strengthen rural economies.

Loan forgiveness for students pursuing health science degrees. Students pursuing health science degrees often incur student loan debt which may encourage them to depart their rural communities for cities in order to strengthen their earning potential to repay their loans. States such as Colorado offer loan forgiveness to health science graduates who work in rural communities that are medically underserved. Congress should provide additional funding to the Health Resources and Services Administration to scale programs such as these to incentivize medical professionals to work in rural communities around the country. In particular, special incentives should be established for graduates of occupational and physical therapy, social work, and speech pathology programs because these degrees are important for serving individuals with disabilities who are overrepresented in rural communities.

Spurring Economic, Workforce, and Community Development in Rural Communities

There are a variety of existing federal programs designed to spur economic development in rural communities. The following programs should be modified to leverage the potential of rural public colleges to support the economic vitality of their regions.

Leverage Regional Commissions to encourage entrepreneurship and economic development.
Federal Regional Commissions (e.g., the Appalachian Regional Commission, Delta Regional Authority, Denali Commission, etc.) lead a variety of economic development and entrepreneurship programs

that Congress should review to determine how rural public colleges may be better leveraged to incentivize economic development through the creation of academically-based internship programs, entrepreneurship and business incubation centers, and continuing education programs for people in rural communities interested in launching new ventures or reskilling.

Modify Rural Business Development Grants.

Many rural small businesses have closed since the crisis began and more are at risk of closing. In college towns, these businesses serve college students, staff, and faculty. As people turn to remote learning and work, they are suffering. Federal programs such as the Rural Business Development Grants focused on small business development should be modified to encourage rural public colleges to incubate and support small businesses as they reconfigure operations to respond to the pandemic.

Modify and leverage existing federal workforce development programs. The Department of Labor's Workforce Opportunity for Rural Communities (WORC) initiative was established to provide funding to rural communities to support workforce and economic development, retrain dislocated workers, and train new workers for in-demand jobs. Congress should increase funding for WORC and incentives should be created to encourage regional partnerships with rural public colleges in light of their vital role in workforce development. The Delta Region has a number of grantees that are public colleges and universities and may serve as an example for reshaping this program to encourage greater involvement of rural public colleges. Additionally, the Consolidated Appropriations Act included funding for community colleges to develop and improve workforce development through classes and training. Congress should also extend this funding to rural public colleges given their workforce development role.

Rural public colleges provide a variety of important community services such as school improvement, cultural and arts programming, and drug rehabilitation. Economic development must take place in tandem with community development as civic health and economic health are inextricably linked. To achieve this, the National Corporation for Community Service should create an AmeriCorps program for nonprofit agencies, public K-12 schools, and government agencies serving rural communities in which students attending rural public colleges can earn tuition benefits by addressing community needs and gaining valuable professional and community development skills they may use after graduation.

Tribal Colleges and Universities play an important anchor institution role for Native American communities and nations. There are a variety of federal programs in place intended to support tribal workforce development (e.g., Tribal TANF, Department of Education's Adult Education programs, and Tribal Vocational Rehabilitation program) that Congress should fully fund and leverage to enhance the role of TCUs in supporting workforce development.

Promoting Rural Educational Access and Attainment Some may be tempted to recommend the closure of rural public colleges and a shift to online learning. Even as online education continues to grow, though, many students, and in particular those in rural areas, remain place-sensitive when it comes to higher education. In other words, many Americans living in rural communities will not leave their regions to pursue a college degree. Given the unevenness of broadband access across rural communities, rural public colleges are thus important physical postsecondary access points. The following recommendations strengthen the ability of rural public colleges to facilitate postsecondary access.

Increase Pell grants for rural Americans. To support the vital role of rural public colleges in facilitating college access for rural Americans, the federal government should establish special financial aid programs for students graduating from rural high schools who qualify for Pell grants. Rural Americans face acute transportation and broadband access challenges that urban and suburban communities do not experience. As such, Pell-eligible rural Americans attending rural public colleges should receive additional funding to mitigate the costs associated with transportation, technology, and college attendance that are exacerbated in rural locales but are usually not considered or covered by Pell grant and state grant programs.

Provide childcare for rural Americans attending college. Increasing college attainment in rural America requires a pipeline approach that begins with primary school and continues through graduate school. Many Americans attending rural public colleges are older than 25 and are juggling familial responsibilities while pursuing their education. While the federal government established the Child Care Access Means Parents In Schools (CCAMPIS) program, it is insufficiently funded and has only made 266 awards to postsecondary institutions since its inception. The federal government must increase funding for this program and reduce the barriers for participation for campuses so that more working adults have access to quality, convenient childcare that will allow them to attend college. The federal government should also consider weighting grant applications from rural public colleges higher given that these areas face acute child care shortages. Rural public colleges have established teacher education programs and would be well-suited to establishing preschools that would also alleviate child care concerns for students; the federal government should provide funding to support the establishment of preschools and other primary schools in rural public colleges.

Adapt TEACH Grant Program to incentivize teachers to work in rural communities. Congress must also act to address critical teacher shortages and funding cuts that have led to four-day school weeks in some rural communities. The federal

Teacher Education Assistance for College and Higher Education (TEACH) program provides \$4,000 grants to teacher education candidates who work in high-needs school districts that enroll a large number of students after graduation. The Department of Education should modify TEACH and include incentives for graduates to work in rural school districts.

Lower Minority Serving Institution enrollment threshold for rural public colleges. In light of the increasingly diverse student bodies attending rural public colleges, the Department of Education should lower the enrollment thresholds for Minority Serving Institution designation for rural public colleges while still ensuring they are serving students of color. Doing so would allow these campuses to enhance student support services.

Leveraging Rural Public Colleges to Improve Rural Infrastructure

Rural infrastructure including access to water, electricity, and broadband internet remains underdeveloped, particularly on Native American reservations. Rural public colleges are poised to support infrastructure development. In addition to the recommendations made above to improve broadband infrastructure, the following federal programs should be adapted to incentivize rural public colleges to partner with local governmental agencies and utilities to improve the infrastructure of their regions. First is the Rural Placemaking Innovation Challenge which provides technical assistance to rural community leaders to improve their communities; rural public colleges should be made eligible to participate in this program. Second is the Community Facilities Programs which supports infrastructured evelopment in rural communities. Currently a Tribal Colleges initiative exists that provides funding to make infrastructure improvements to educational facilities. A similar program should be created for rural public colleges. Ensuring the long-term financial sustainability of rural public college

The federal government should establish a formal Rural Serving Institution (RSI) designation which would identify RSIs and strengthen their rural-serving missions. An RSI designation would operate similarly to Minority Serving Institution designations and would identify RSIs as institutions that enroll students from rural high schools and engage in robust service to their rural communities. Such a designation should provide grant funding to rural public colleges to support their comprehensive regional service mission and improve their capacity to address public health, educational, and economic challenges. The Higher Education Act (HEA) Part Q was intended to provide grants for rural serving colleges and universities to increase educational attainment especially of adult learners and to improve economic development in rural communities while encouraging college and community partnerships yet this program was never funded. The federal government should modify HEA Part Q and fund it to provide incentives for additional rural-serving activities such as community development, public health, cultural and arts programming, and K-12 schools. Once the Rural Serving Institution designation exists, colleges designated as RSIs should be made eligible to apply for Part Q funds.

LOOKING TO THE FUTURE

Ultimately rural communities are only as strong as their people and anchor institutions. By ensuring both the short-term viability and long-term sustainability of rural public colleges, the federal government can strengthen and transform America's rural communities and improve the livelihoods of the people who live there. Rural public colleges were already challenged before COVID-19 and this current crisis has only exacerbated the challenges they face. That said, this crisis also creates an opportunity for the federal government to support and affirm the vital role rural public colleges play in their regions and communities.

Appendix A.

Adams State University	Eastern New Mexico University Main Campus	Kentucky State University
Alcorn State University		Lake Superior State University
	Eastern Oregon University	
Appalachian State University		Langston University
	Eastern Washington University	
Arkansas Tech University		Lock Haven University
	Elizabeth City State University	
Bemidji State University		Louisiana State University - Alexandria
	Emporia State University	
Black Hills State University		Louisiana Tech University
	Fairmont State University	
Bluefield State College		Mayville State University
	Ferris State University	
Central State University		Minot State University
	Fort Hays State University	
Central Washington University		Mississippi University for Women
	Fort Valley State University	
Chadron State College		Mississippi Valley State University
	Georgia Southern University	
Concord University		Montana State University
	Georgia Southwestern State University	
Dakota State University		Montana State University - Northern
	Glenville State College	
Delta State University		Montana Technological University
	Grambling State University	
Dickinson State University		Morehead State University
	Henderson State University	
East Central University		Murray State University
	Humboldt State University	
Eastern Illinois University		Nevada State College
	Indiana University - East	
Eastern Kentucky University		New Mexico Highlands University

Northeastern State University	Southeastern Oklahoma State University	The University of Montana - Western
Northern Michigan University	Southern Arkansas University	The University of Tennessee - Martin
Northern State University	Main Campus	The University of Virginia's College at Wise
Northwest Missouri State University	Southern Utah University	Troy University
Northwestern Oklahoma	Southwest Minnesota State University	Troy Offiversity
State University	Southwestern Oklahoma	University of Alaska Southeast
Northwestern State University of Louisiana	State University	University of Arkansas at Monticello
	Stephen F Austin State University	University of Central Missouri
Oklahoma Panhandle State University	Sul Ross State University	University of Hawaii at Hilo
Oklahoma State University Main Campus	SUNY College at Brockport	University of Idaho
Peru State College	SUNY College at Plattsburgh	University of Maine at Augusta
Pittsburg State University	SUNY College of Agriculture and Technology at Cobleskill	University of Maine at Fort Kent
Prairie View A & M University	SUNY College of Technology	University of Maine at Machias
Rogers State University	at Canton	University of Maine at Presque Isle
Sam Houston State University	SUNY Oneonta	University of Maryland Eastern Shore
Shawnee State University	Tarleton State University	University of Minnesota - Crookston
Shepherd University	Texas A & M University - Commerce	University of Mississippi
South Dakota State University	Texas A & M University - Kingsville	University of Nebraska at Kearney
	Texas A & M University - Texarkana	

University of North Carolina
at Pembroke

Western New Mexico University

University of North Georgia

Wright State University

Lake Campus

University of Science and Arts of Oklahoma

University of South Dakota

University of West Alabama

University of West Georgia

University of Wisconsin - Platteville

University of Wisconsin - River Falls

University of Wisconsin - Stevens Point

University of Wisconsin - Stout

University of Wisconsin - Whitewater

University of Wyoming

Valley City State University

Wayne State College

West Liberty University

West Texas A & M University

Western Carolina University

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- ³⁴ Ardoin, S. (2018). *College aspirations and access in working-class rural communities: The mixed signals, challenges, and new language first-generation students encounter.* Lanham, MD: Lexington Books. Teiken, M. C. (2014). *Why rural schools matter.* Chapel Hill: The University of North Carolina Press.
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- ³⁶ Miller, M. T., & Tuttle, C. C. (2007). Building communities: How rural community colleges develop their communities and the people who live in them. *Community College Journal of Research and Practice*, 31, 117-127. doi:10.1080/10668920500441689.
- ³⁷ There are many rural community colleges, technical institutions, and private not-for-profit institutions, as well as many institutions that, while not rurally-located, are dedicated to educating students from rural communities. Although these institutions play important roles in rural communities and are worthy of study, they are beyond the scope of our report.
- ³⁸ Due to the unique histories, missions, funding streams, and governance structures of Tribal Colleges and Universities and their ties to rural communities, the research team chose to discuss these institutions separately.
- ³⁹ Crisp, G., Doran, E., Salis Reye, N. A., (2018). Predicting graduation rates at 4-year broad access institutions using a bayesian modeling approach. *Research in Higher Education*, 59(2), 133-155; Jackson, J., & Kurlaender, M. (2014). College readiness and college completion at broad access 4-year institutions. *American Behavioral Scientist*, 58(8), 947-971.

- ⁴⁰ The research team also compared the six-variable measure with a four-variable measure that excluded program offerings and found considerable overlap (correlated at 97%), and the team cross-referenced this list of institutions with institutions that are members of the most well-recognized professional association for bachelor's-granting institutions with a broad-access mission, the American Association of State Colleges and Universities. The two designations are positively and significantly correlated, but there are differences, although many of the differences appear to be attributable to factors that are not problematic for this purpose (system-wide or state-wide memberships, lapsed memberships, etc).
- ⁴¹ The U.S. Census and IPEDS use "American Indian" to refer to Native American individuals and students.
- ⁴² Shotton, Heather J., Shelly C. Lowe, and Stephanie J. Waterman. (2013) *Beyond the asterisk: Understanding Native students in higher education*. Stylus Publishing; Smith, L. T. (1999). *Decolonizing methodologies: Research and indigenous peoples*. London and New York: Zed Books.
- ⁴³ Nelson, C. A. & Frye, J. R. (2016). *Tribal College and University funding: Tribal sovereignty at the intersection of federal, state, and local funding.* American Council on Education. https://www.acenet.edu/Documents/Tribal-College-and-University-Funding.pdf.
- ⁴⁴ AIHEC/EMSI. (2015). *The economic value of American Indian and Alaska Native Tribal Colleges & Universities*. American Indian Higher Education Council/Economic Modeling Specialist International. http://www.aihec.org/our-stories/investmentReturn.htm.
- ⁴⁵ NASNTI. (2020). *Native American-Serving Nontribal Institutions Program*. US Department of Education. https://www2.ed.gov/programs/nasnti/eligibility.html.
- ⁴⁶ The process for coding race and ethnicity shifted in 2010 to become more inclusive of individuals who identify as more than one race and to separate ethnicity (Hispanic/Latino) from the racial classifications. This shift, while likely intended to be more inclusive, has resulted in a systematic undercounting of Native American students in higher education, and the magnitude of that undercounting likely exceeds undercounting for other populations. One indicator is the percentage of students who are coded as "two or more races" which average around 3.6% for all institutions in the group, but over 10% for the NASNTI institutions. There is no systematic collection or reporting of data on tribal citizenship for these institutions (unlike the enrollment data at TCUs, where federal funds distributed under Title I of the Tribally Controlled Colleges and Universities Assistant Act are linked to native students who are enrolled members of federally recognized tribes or the biological children of tribal members).
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- ⁴⁹ Burrows, E., Suh, R., & Hamann, D. (2012). *Healthcare workforce distribution and shortage issues in rural America*. National Rural Health Association Policy Brief. National Rural Health Association. https://getattachment/Advocate/Policy-Documents/HealthCareWorkforceDistributionand-ShortageJanuary2012.pdf.aspx?lang=en-US;; Weisner, L., Otto, H. D., Adams, S. (2020). *Issues in policing rural areas: A review of the literature*. Illinois Criminal Justice Information Authority. https://icjia.illinois.gov/research/education/tages in rural areas. *National Conference of State Legislatures*. https://www.ncsl.org/research/education/tackling-teacher-and-principal-shortages-in-rural-areas.aspx.
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