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March 2024

HIGHER EDUCATION

Hispanic-Serving Institutions Reported Extensive Facility and Digital Infrastructure Needs

GAO-24-106162

GAO Highlights

Highlights of GAO-24-106162, a report to congressional committees

March 2024

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Hispanic-Serving Institutions Reported Extensive Facility and Digital Infrastructure Needs

Why GAO Did This Study

HSIs play a prominent role in the nation's higher education system. For example, 574 HSIs enrolled over 2 million Hispanic students in the 2021–2022 school year, representing 60 percent of all Hispanic students in college. Like most colleges, HSIs must continue to invest in their facilities and digital infrastructure to serve their students safely and effectively.

A 2021 House report includes a provision for GAO to examine the infrastructure needs—both physical and digital—at HSIs. This report describes HSIs' (1) facility needs, (2) digital infrastructure needs, and (3) funding sources for capital projects.

To conduct this work, GAO surveyed a representative sample of HSIs in the U.S. (including Puerto Rico) and received generalizable responses from 169 colleges. Survey estimates have a margin of error no greater than plus or minus 8 percentage points at the 95 percent level of confidence. GAO also analyzed the most recent HSI data on college student and institutional characteristics (2021–2022), finances (2020–2021), HSI grant programs (2017–2022), and COVID relief funds (2021). GAO also visited 10 HSIs—selected to capture different sizes, sectors (public or private nonprofit), and geographic regions—and interviewed Education officials and HSI organizations. In addition, GAO reviewed relevant federal laws, regulations, and guidance.

View GAO-24-106162. For more information, contact Melissa Emrey-Arras at (617) 788-0534 or emreyarrasm@gao.gov.

What GAO Found

Hispanic-Serving Institutions (HSI)—colleges with an undergraduate student enrollment that is at least 25 percent Hispanic—have extensive facility needs, according to GAO's generalizable survey of HSIs. Based on GAO's survey, an estimated 43 percent of HSIs' building space (i.e., square footage) needs repairs or replacement, on average. Deferred maintenance backlogs, damage from natural disasters or severe weather, and facility modernization efforts drive HSIs' facility needs. For example, HSIs have an average deferred maintenance backlog of almost $100 million, based on GAO's survey. Further, an estimated 77 percent of HSIs have at least one deferred maintenance project that addresses a health or safety issue. In addition, an estimated 65 percent of HSIs have experienced at least one natural disaster or severe weather event in the past 5 years that has resulted in the need to repair or replace some facilities.

HSIs also reported unmet digital infrastructure needs related to internet access and connectivity, cybersecurity, and hybrid learning efforts, according to GAO's survey. For example, GAO estimates that at roughly a third of HSIs, more than 10 percent of students cannot reliably connect to the internet off-campus either because they cannot afford an internet connection or they lack an appropriate device. Most HSIs (an estimated 74 percent) have also experienced a cyberattack within the previous 5 years. HSIs made recent investments in hybrid learning as a result of the COVID-19 pandemic and related federal funding. However, GAO estimates 90 percent of HSIs that offer hybrid courses face some challenge continuing to deliver them, based on survey results.

Examples of Facility and Digital Infrastructure at Hispanic-Serving Institutions

Residence facility in need of repair

Digital infrastructure being installed into classroom

Source: GAO site visits to Hispanic-Serving Institutions (HSI). | GAO-24-106162

HSIs relied on multiple sources to fund their capital project needs over the last 5 years. These sources frequently included state capital grants or appropriations for public HSIs and tuition and fees for private HSIs, according to GAO's survey. GAO estimates 43 percent of HSIs were satisfied with their overall access to funding. However, HSIs reported common challenges securing funding for capital projects. For example, an estimated 74 percent of public HSIs consider insufficient state funding to be a challenge towards addressing capital project needs, based on GAO's survey. Additionally, about three quarters of private HSIs face challenges due to declining tuition and fees revenue. The Department of Education has three grant programs for eligible HSIs. Although HSIs can use this funding to support capital projects, instead, they generally use these grant funds for other needs, such as student services, according to Education officials.

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Abbreviations

COVID relief funds	Higher Education Emergency Relief Funds
FEMA	Federal Emergency Management Agency
HSI	Hispanic-Serving Institution
HVAC	heating, ventilation, and air conditioning
IPEDS	Integrated Postsecondary Education Data System
IT	information technology
Mbps	Megabits per second
NTIA	National Telecommunications and Information Administration
STEM	science, technology, engineering, or mathematics

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March 12, 2024

The Honorable Tammy Baldwin
Chair
The Honorable Shelley Moore Capito
Ranking Member
Subcommittee on Labor, Health and Human Services,
Education and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Robert Aderholt
Chair
The Honorable Rosa DeLauro
Ranking Member
Subcommittee on Labor, Health and Human Services,
Education and Related Agencies
Committee on Appropriations
House of Representatives

Hispanic students make up a growing share of college enrollment, having increased from 6 percent in 1990 to 21 percent in 2021.[1] Alongside this increase has been a growth in Hispanic-Serving Institutions (HSI)—degree-granting public or nonprofit colleges with an undergraduate Hispanic enrollment of at least 25 percent.[2] As of 2022, 574 HSIs across the country enrolled over 2 million Hispanic students, serving 60 percent

[1]Department of Education, Digest of Education Statistics, table 306.20 (Dec 2022). Data does not include institutions in Puerto Rico. Education data sources we cite in this report use the term "Hispanic or Latino", which refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. While there is no consensus on a preferred term to describe this population (e.g., Hispanic, Latino, Latina, Latinx), we use the term Hispanic in this report.

[2]The HSI classification used in this report is derived from the Higher Education Act 1965, as amended. The act generally defines an HSI as a public or private nonprofit institution with an enrollment of undergraduate full-time equivalents that is at least 25 percent Hispanic and that also meets other eligibility criteria, such as having a certain enrollment of needy students. In this report, unless otherwise clear from context, we use a broader definition of HSIs as public or private nonprofit institutions having Hispanic enrollment of at least 25 percent, which aligns with the more common use of the term in public discourse. Colleges' HSI status may change each year based on fluctuations in enrollment or other changes. For more information about our methodology for identifying HSIs, see appendix I. We also use the term "college" to describe all types of higher education institutions.

of all Hispanic students attending college.[3] Like most colleges, HSIs undertake capital projects—repairs, renovations, or new construction—to help ensure their students have well-maintained, safe, and functional facilities. Additionally, the COVID-19 pandemic highlighted the need for HSIs and other colleges to invest in their digital infrastructure to meet the demand for remote and hybrid learning.

We previously identified capital project needs at Historically Black Colleges and Universities (another group of minority-serving institutions) and highlighted challenges they can face financing capital projects.[4] A 2021 House report includes a provision for us to examine the infrastructure needs—both physical and digital—at HSIs.[5] This report describes (1) HSIs' facility capital project needs, (2) HSIs' digital infrastructure needs, and (3) the funding sources HSIs use to address their capital project needs.

To address all three objectives, we surveyed a statistical sample of HSIs in the U.S. (including Puerto Rico) from May through June 2023, and the results were generalizable to all HSIs unless otherwise noted.[6] We also visited 10 selected HSIs in three states (California, New Mexico, and Texas) and Puerto Rico to meet with college administrators and tour facilities.[7] In addition, we interviewed officials from the Department of Education, representatives from an HSI association and an HSI research organization, officials knowledgeable about higher education facilities, and others.

We also analyzed data from Education's Integrated Postsecondary Education Data System (IPEDS) from the 1994-1995 through 2021-2022

[3]These HSIs enrolled 4.5 million students overall. Enrollment data is from the 2021-2022 school year, the most recent data available at the time of our analysis.

[4]GAO, *Historically Black Colleges and Universities: Action Needed to Improve Participation in Education's HBCU Capital Financing Program,* GAO-18-455 (Washington, D.C.: June 26, 2018).

[5]H.R. Rep. No. 117-96, at 297 (2021).

[6]We obtained a weighted response rate of 75 percent of HSIs surveyed. Data from our survey are self-reported by HSIs. We did not independently verify the responses. The survey included questions on capital project needs, digital infrastructure needs, and funding sources. For more information about our survey methodology, see appendix I.

[7]We selected site visit locations that would provide a range of schools in terms of sector (public or private nonprofit), enrollment size, and location (e.g., urban, rural). We also selected states and territories with 20 or more HSIs.

school years to learn more about the characteristics of HSIs.[8] Additionally, we used IPEDS data to examine differences in institutional, student, and financial characteristics between HSIs and similar non-HSIs. We identified the comparison group of similar non-HSIs using a statistical matching technique. We used IPEDS financial data reported by colleges for their most recent fiscal year ending before October 1, 2021, the most recent data available at the time of our analysis.

We also reviewed data from Education's grant programs for eligible HSIs. We analyzed new awards from fiscal years 2017 through 2022 to identify the amount of grant funds spent on capital projects.[9] In addition, we analyzed Education data on Higher Education Emergency Relief Funds (COVID relief funds) to determine the amount of this funding HSIs used for digital infrastructure. We also reviewed all applications Education approved from certain HSIs to use COVID relief funds for new construction or renovation of existing facilities. We assessed the reliability of the IPEDS and Education funding data by reviewing related documentation, interviewing officials responsible for maintaining the data system, and conducting electronic testing of the data, and we found the data to be reliable for the purposes of this report. We also reviewed relevant federal laws, regulations, and guidance.

For more details on our analysis and methods, see appendix I.

We conducted this performance audit from July 2022 to March 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[8]IPEDS data on the characteristics of HSIs from 2021-2022 was the most recent data available at the time of our analysis. IPEDS is a system of interrelated surveys conducted annually by Education's National Center for Education Statistics. IPEDS gathers information on every college, university, and technical and vocational institution that participates in federal student financial aid programs. IPEDS collects data on postsecondary education in seven areas: institutional characteristics, institution prices, enrollment, student financial aid, degrees and certificates, student persistence and success, and institutional human and fiscal resources.

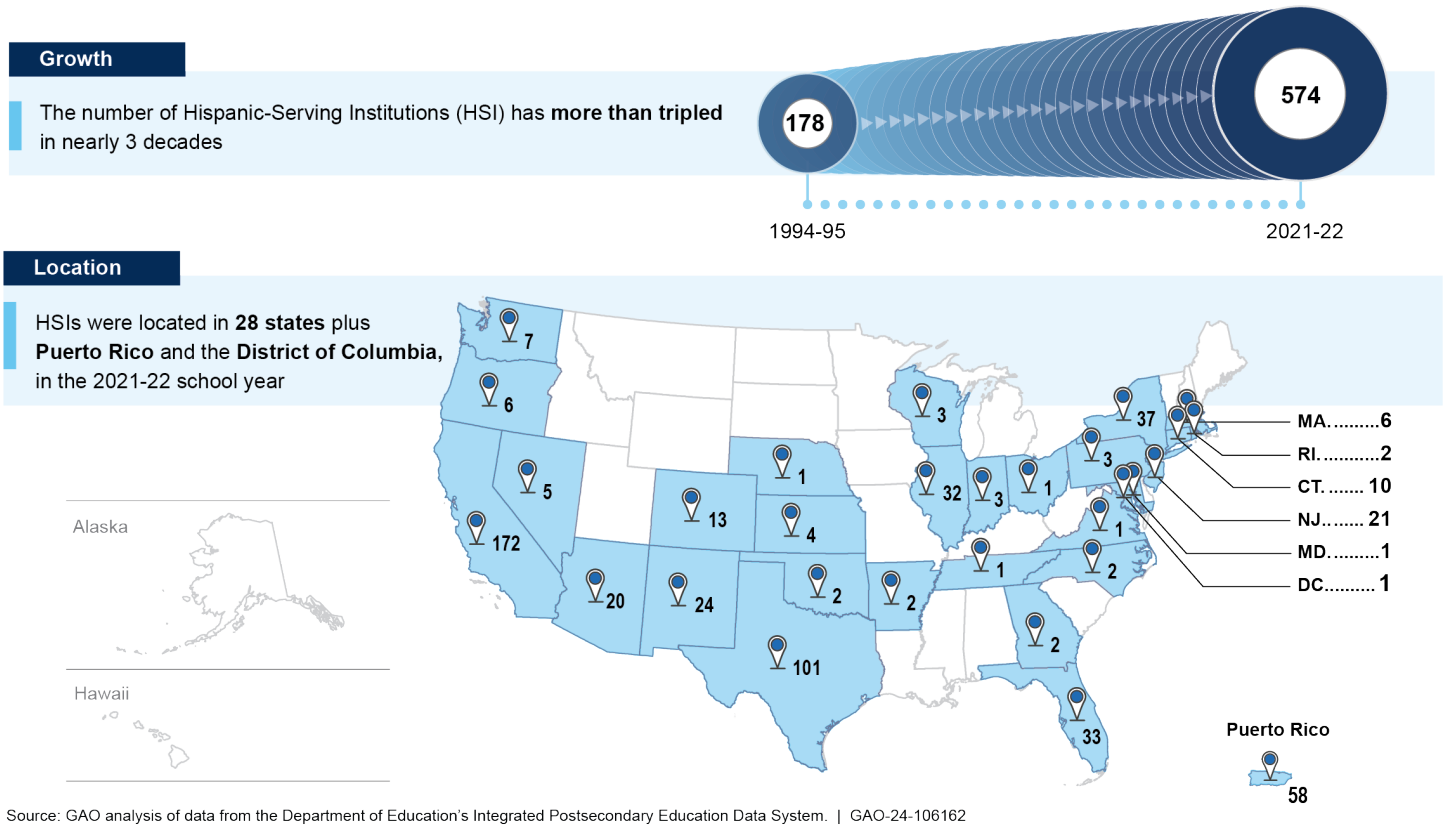
[9]We used colleges' proposed budgets in their grant applications for this analysis to assess spending plans over the full 5-year award cycle of the grants which may differ from the final dollar amount used towards capital projects.

Background

HSI Trends and Demographics

The Higher Education Act was amended in 1992 to add the HSI designation to improve and expand the capacity of these colleges to serve Hispanic students.[10] Since the mid-1990s, the number of HSIs has more than tripled (see fig. 1).

Figure 1: Hispanic-Serving Institutions' Growth and Geographic Location



Source: GAO analysis of data from the Department of Education's Integrated Postsecondary Education Data System. | GAO-24-106162

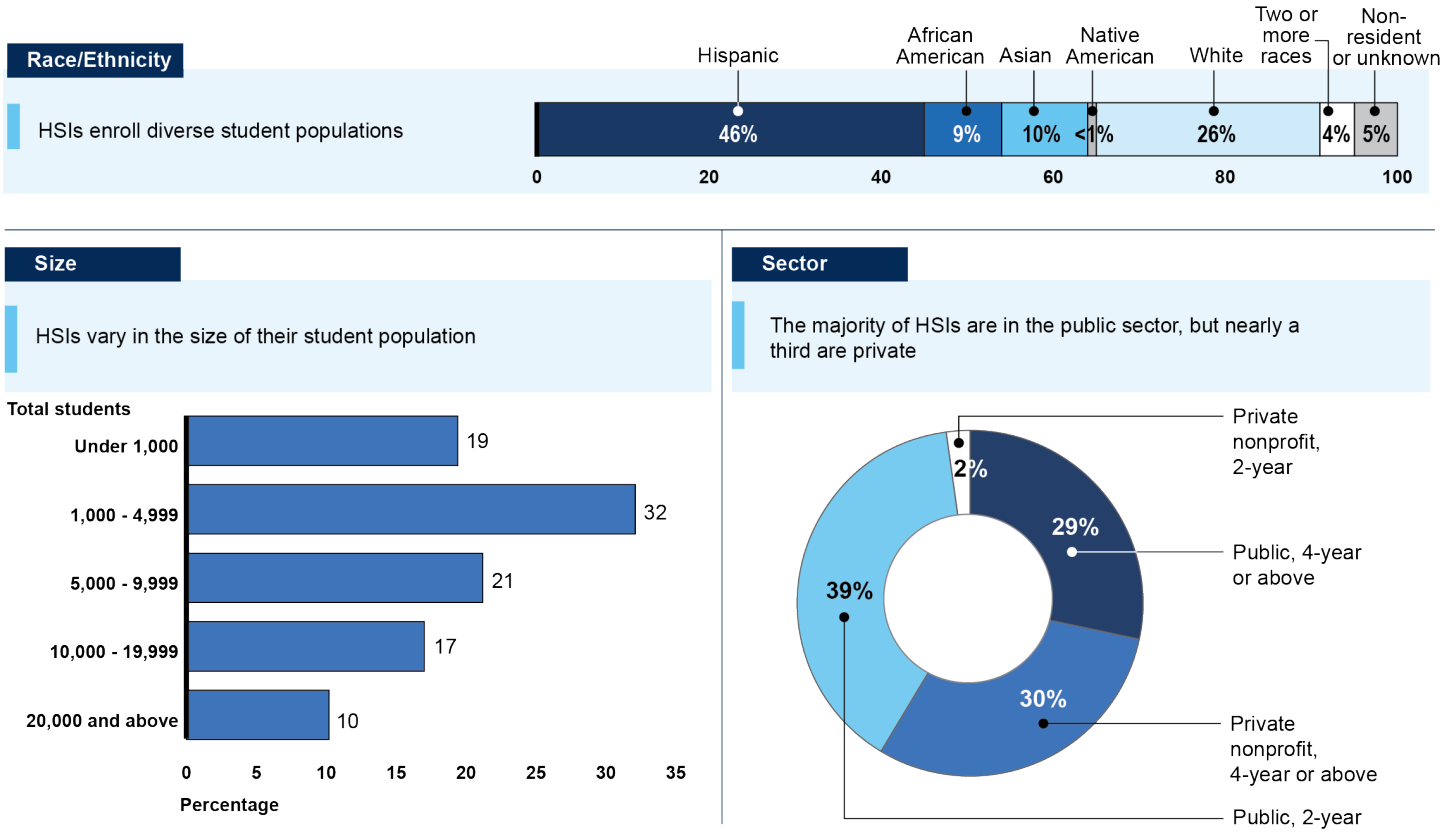
Although HSIs are characterized by their enrollment of Hispanic students, HSIs serve a diverse population overall (see fig. 2).[11] Colleges that became HSIs more recently generally enroll a lower proportion of

[10]HSI grants are also intended to expand services to low-income students, according to the act. Congress first appropriated grant funds for HSIs in the 1994-95 school year.

[11]Most HSIs were not originally established to serve a particular student population, unlike some other minority-serving institutions, such as Historically Black Colleges and Universities, whose principal mission is the education of Black Americans.

Hispanic students than more established HSIs.[12] HSIs also vary in size and sector, but the majority of HSIs are public colleges (68 percent) and have fewer than 10,000 students (72 percent).

Figure 2: Hispanic-Serving Institutions (HSI) by Size, Sector, and Race/Ethnicity



Source: GAO analysis of data from the Department of Education's Integrated Postsecondary Education Data System (2021-22 school year). | GAO-24-106162

Notes: Totals may not equal 100 due to rounding. Race and ethnicity figures are based on total enrollment across all HSIs.

HSI Grant Programs

[12]For example, Hispanic individuals represented 68 percent of students enrolled at colleges that were an HSI in 1994-95 and remained HSIs in the 2021-22 school year. In contrast, Hispanic individuals represented 29 percent of students enrolled at colleges that became an HSI in the last 5 years (2017-18 through 2021-22). More established HSIs also serve more Pell Grant-eligible students—those with exceptional financial need—than more recently designated HSIs (44 percent and 36 percent, respectively).

Education manages three competitive grant programs for eligible HSIs. These grants are intended to increase the colleges' self-sufficiency by improving their academic programs, institutional management, and fiscal stability.[13] These programs primarily fund activities that expand educational opportunities for Hispanic students and also allow funding for new construction and building renovation and repair (see table 1).

Table 1: Department of Education Hispanic-Serving Institution (HSI) Grant Programs

Program	Program purpose	2023 funding
Developing HSIs	Support efforts to expand and enhance academic offerings, program quality, and institutional stability of HSIs as well as expand education opportunities for and improve academic attainment of Hispanic students.	$228 million
Promoting Postbaccalaureate Opportunities for Hispanic Americans	Expand postbaccalaureate educational opportunities and academic offerings to improve academic attainment of Hispanic students and enhance program quality at the HSI.	$27 million
Developing HSIs – Science, Technology, Engineering, or Mathematics (STEM) and Articulation	Increase the number of Hispanic and low-income students attaining STEM degrees, and develop transfer and articulation agreements between community colleges and 4-year institutions in STEM programs[a]	$94 million

Source: GAO summary of information from the Department of Education. | GAO-24-106162

[a]Articulation agreements specify how transferred course credits meet program or degree requirements among colleges.

COVID Relief Funds

Since 2020, Education has awarded approximately $75 billion in COVID relief funds to colleges to "prevent, prepare for, and respond to [the] coronavirus" pandemic.[14] The vast majority of these funds ($69.9 billion) were provided via direct grants to all eligible colleges. About $5.7 billion

[13]On an annual basis, Education identifies institutions that are eligible to apply for HSI grant funding under Titles III and V of the Higher Education Act of 1965, as amended. Our report focused on Education grants only available to HSIs. Education offers other grant opportunities to minority-serving institutions for which HSIs may also be eligible, such as the Digital Learning Infrastructure and IT Modernization Pilot and the Research and Development Infrastructure Grant Program.

[14]CARES Act, Pub. L. No. 116-136, § 18004, 134 Stat. 281, 567 (2020); Coronavirus Response and Relief Supplemental Appropriations Act, 2021, Pub. L. No. 116-260, § 314, 134 Stat. 1182, 1932; American Rescue Plan Act of 2021, Pub. L. No. 117-2, § 2003, 135 Stat. 4, 23. Congress appropriated $76.23 billion for COVID relief funds over three iterations of legislation from March 2020 through March 2021. Subsequent rescissions reduced funding to $75.48 billion.

was designated specifically for minority-serving institutions.[15] Colleges were required to distribute at least half of the funds they received from the direct grants to students as emergency financial aid grants.

The remaining funding from direct grants, called the institutional portion, could be used to address specified costs incurred by the pandemic, such as equipment needed to transition to remote learning. Institutional funds could also be used to address other pandemic-related disruptions, including revenue declines from lost room and board. The separate funding specifically for minority-serving institutions could be used toward student grants or institutional costs. In total, HSIs received at least $14 billion in institutional funds from direct grants and over $1 billion for certain HSIs through additional minority-serving institution funds.[16]

HSIs Reported Having Extensive Facility Needs

Buildings at HSIs Require Repair and Replacement and Many HSIs Need to Expand

Based on our generalizable survey of HSIs, an estimated 43 percent of their building space (i.e., building square footage), on average, needs repairs or total replacement.[17] A proportion of HSIs have more extensive needs for repair or replacement. We estimate that 14 percent of HSIs have at least 75 percent of their building space that needs repair or replacement, based on our survey.[18] In some cases, entire buildings may need to be replaced. For example, one HSI we visited has a residence

[15]An additional $745 million was provided through the Fund for Improvement of Postsecondary Education program to colleges with the greatest unmet needs related to coronavirus. These amounts do not include subsequent rescissions that reduced total college COVID relief funds by $753 million.

[16]Education awarded these funds to eligible grantees of the Developing Hispanic-Serving Institutions program and Promoting Postbaccalaureate Opportunities for Hispanic Americans Program. Some HSIs were also awarded other minority-serving institution funds.

[17]The 95 percent confidence interval for this estimate is (39, 48). For the purposes of this report, we define building space as the floor areas (i.e., building square footage) on all levels of a building that are enclosed within the building, representing the cumulative total of a college's buildings including all floors to the outside faces of exterior walls. Based on our survey, we also estimate that, on average, 51 percent of HSIs' building space is fully functional. The 95 percent confidence interval for this estimate is (46, 56). We round all percentage estimates presented in this report to the nearest point.

[18]The 95 percent confidence interval for this estimate is (9, 21).

hall that has been vacant due to extensive needs for repairs (see fig. 3). Officials said they intend to demolish and replace it with a new facility because the cost of these repairs exceeds the cost of demolition.

Figure 3: Example of Vacant Facility to Be Demolished on an HSI Campus

According to the HSI officials, the cost to repair these vacant residential halls exceeds the cost of demolition.

Source: GAO site visit to a Hispanic-Serving Institution (HSI). | GAO-24-106162

In addition to repair and replacement needs, many HSIs anticipate they will need more space to meet their future needs. Based on our survey, an estimated 56 percent of HSIs expect that they will need to increase the space on their campus over the next 5 years.[19] Similarly, six of the 10 HSIs we visited were expanding their campus through new construction projects.

Conversely, we estimate 11 percent of HSIs expect that their current amount of building space exceeds their future demand, based on our survey.[20] These HSIs may have excess space due, in part, to enrollment

[19]The 95 percent confidence interval for this estimate is (49, 64).

[20]The 95 percent confidence interval for this estimate is (7, 17).

declines or the increase in hybrid learning and remote work since the pandemic.[21]

Deferred Maintenance, Natural Disasters or Severe Weather, and Modernization Efforts Drive HSIs' Facility Needs

Based on our survey and interviews with HSI officials, we identified three common causes of HSIs' facility needs: deferred maintenance, natural disasters or severe weather, and facility modernization.

Deferred Maintenance

HSIs have extensive backlogs of deferred maintenance—repairs that were not performed when they should have been. Based on our survey, we estimate that HSIs' average deferred maintenance backlog is about $95.2 million.[22]

In comparison HSIs spent, on average, an estimated $4.6 million on deferred maintenance projects in the most recent year, which addresses a fraction of the average backlog.[23] About half (54 percent) of HSIs expect these backlogs to increase over the next 3 years.[24]

[21]A 2023 industry report states that virtual and hybrid learning environments have changed how colleges and universities think about the role of a physical campus. See Gordian, *State of Facilities in Higher Education: A Call for Adaptability and Transformative Action,* 10th ed., https://www.gordian.com/resources/state-of-facilities-in-higher-education-10th-edition/.

[22]The 95 percent confidence interval for this estimate is ($57 million, $133.5 million). The average deferred maintenance backlog represents a self-reported estimate from HSIs that also reported that they measure deferred maintenance in our survey. An estimated 24 percent of HSIs do not measure their deferred maintenance. The 95 percent confidence interval for this estimate is (18, 31). Of the 110 HSIs that reported their deferred maintenance backlog amount in our survey, 50 percent had a deferred maintenance backlog greater than $15 million. The highest deferred maintenance backlog reported in our survey was $1 billion. Smaller deferred maintenance backlogs can also be difficult for HSIs to address. For example, officials at one HSI we visited (that enrolled about 5,000 students) said the HSI struggled to address its $22 million deferred maintenance backlog.

[23]The 95 percent confidence interval for this estimate is ($3.2 million, $5.9 million).

[24]The 95 percent confidence interval for this estimate is (45, 64). The trend in deferred maintenance backlogs represents a self-reported figure from HSIs that reported that they measure deferred maintenance in our survey. Furthermore, an estimated 44 percent of HSIs expect their deferred maintenance backlogs to either remain the same or decrease over the next 3 years. The 95 percent confidence interval for this estimate is (34, 53).

Failing Heating, Ventilation, and Air Conditioning (HVAC) Systems

HSI relies on rusted HVAC system that is over 15 years old and requires total replacement, according to officials.

Five of the 10 HSIs we visited described deferred maintenance challenges related to HVAC systems. For example, officials at one college said they had to close the campus and cancel classes when their HVAC system failed because the building was too hot to occupy. Officials at another HSI said they rely on their HVAC systems to cool IT systems and sensitive laboratory equipment, which can be damaged when their HVAC system fails.

Source: GAO site visits to Hispanic-Serving Institutions (HSI). | GAO-24-106162

Officials at eight of the 10 HSIs we visited said funding constraints, including lack of staff to manage or perform maintenance, prevent them from reducing their deferred maintenance backlogs.[25] Deferred maintenance can also prevent HSIs from addressing other priorities. Based on our survey, an estimated 55 percent of HSIs have deferred maintenance backlogs so large they cannot fund other capital projects.[26] In addition, deferring maintenance can result in increased costs and diminished performance of critical systems (see sidebar).[27]

Unaddressed deferred maintenance projects can also result in health or safety issues. Based on our survey, we estimate that 77 percent of HSIs have planned or recently completed deferred maintenance projects that address a health or safety issue.[28] The most commonly cited health or safety issues were accessibility (an estimated 57 percent) and electrical or fire hazards (an estimated 55 percent) (see fig. 4).[29]

[25]For example, officials at one HSI told us that they have reduced their maintenance staff from about 20 employees to one employee due to funding constraints.

[26]The 95 percent confidence interval for this estimate is (47, 63).

[27]In 2022, we reported that delaying or deferring routine maintenance and repairs may diminish the performance of systems in the near term and shorten their useful lives in the long term. Deferred maintenance can eventually result in significantly higher costs or premature replacement. See GAO, *Federal Real Property: Agencies Attribute Substantial Increases in Reported Deferred Maintenance to Multiple Factors,* GAO-23-106124 (Washington, D.C.: Oct. 28, 2022).

[28]The 95 percent confidence interval for this estimate is (70, 83).

[29]The 95 percent confidence intervals for these estimates are (49, 65) and (47, 63), respectively. On our survey we categorized accessibility-deferred maintenance as deferred maintenance projects in which HSIs intend to address compliance with the Americans with Disabilities Act, such as inoperable accessibility features, as well as existing deferred maintenance that creates accessibility barriers. See appendix II for additional survey results.

Figure 4: Examples of Deferred Maintenance Health and Safety Issues Observed at HSIs

Nearly eight in 10 HSIs have recent or planned deferred maintenance projects that address a health or safety concern, based on GAO's survey of HSIs

55% of HSIs have a deferred maintenance project to address electrical or fire hazards

Damaged electrical outlet in academic building

36% of HSIs have a deferred maintenance project to address mold

Walls damaged due to moisture and mold

57% of HSIs have a deferred maintenance project to address barriers to accessibility

Inoperable elevator that limits access to faculty offices

40% of HSIs have a deferred maintenance project to address exposure to hazardous materials

Sign advertising presence of asbestos in telecommunications closet

Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI) and observations from site visits to HSIs. | GAO-24-106162

Notes: The percentages are estimates generated from GAO's nationally generalizable survey of HSIs. The 95 percent confidence intervals for the estimates in the top row from left to right are (47, 63) and (28, 43). The 95 percent confidence intervals for the estimates in the bottom row from left to right are (49, 65) and (32, 47).

Natural Disasters and Severe Weather

Based on our survey, an estimated 65 percent of HSIs experienced at least one natural disaster or severe weather event in the previous 5 years that resulted in the need for repair, renovation, or replacement of facilities.[30] The most commonly reported natural disasters and severe weather were severe rain, severe wind, and hurricanes.[31] Of the HSIs that reported damage from a natural disaster or severe weather event, an estimated 22 percent of their building space was damaged, on average.[32] The estimated average cost to these HSIs to address this damage was about $2.6 million.[33] Officials said these repair costs can be challenging to address because they are often unexpected, so HSIs must divert funds from other projects.

While natural disasters and severe weather have affected many HSIs in the previous 5 years, HSIs may also face increased exposure to such events in the future. The four states and one territory with the largest number of HSIs—accounting for 70 percent of all HSIs—are predicted to experience more frequent and intense weather than previous years due to climate change, according to the U.S. Global Change Research Program.[34]

[30]The 95 percent confidence interval for this estimate is (57, 72). For the purposes of this report, we consider the following as a natural disaster or severe weather event: hurricane, tornado, severe rain resulting in flooding damage to buildings, severe wind resulting in damage to buildings, hail, earthquake, and wildfire. HSIs self-identified whether a natural disaster or severe weather event occurred. As such, natural disasters or severe weather events may have been reported that were not formally declared a disaster by a government entity.

[31]In the past 5 years, an estimated 44 percent of HSIs report experiencing severe rain resulting in flooding damage to buildings and an estimated 30 percent of HSIs report experiencing severe wind resulting in damage to buildings. The 95 percent confidence intervals for these estimates are (36, 52) and (22, 37), respectively. We estimate 23 percent of HSIs have experienced damage from a hurricane in the same time frame. The 95 percent confidence interval for this estimate is (16, 30).

[32]The 95 percent confidence interval for this estimate is (15, 29).

[33]The 95 percent confidence interval for this estimate is ($1.3 million, $3.9 million). This estimate does not include costs to HSIs to make facilities more resilient to such events.

[34]According to our analysis of IPEDS data, California (172), Texas (101), Puerto Rico (58), New York (37), and Florida (33) contain 401 of the 574 HSIs designated for the 2021-2022 academic school year. The U.S. Global Change Research Program's Fifth National Climate Assessment states that intense and frequent climate-related events are expected to increase in the geographic regions containing these states and territory. See U.S. Global Change Research Program *Fifth National Climate Assessment.* Washington, D.C.: 2023.

All three of the HSIs we visited in Puerto Rico described severe damage from hurricanes Irma, Maria, or Fiona, and some have unaddressed damage on campus.[35] Officials at one HSI said extensive damage to the campus threatened it with permanent closure. Several buildings on that campus are unoccupied due to the damage, which creates space constraints for academic programs and student housing (see fig. 5).

Natural Disasters' Impact on Electricity for Hispanic-Serving Institutions (HSI) in Puerto Rico

Generators purchased by an HSI to ensure continuity of operations.

Officials at all three of the HSIs we visited in Puerto Rico described extensive challenges with maintaining consistent electricity. Hurricanes damaged the island's already vulnerable electrical grid, which resulted in power outages that persisted for nearly a year in some areas. Officials at one HSI we visited said their campus was without power for 23 days after Hurricane Fiona in 2022. Officials at another HSI said their campus was without power for 3-4 months after Hurricane Maria in 2017.

Officials from the three HSIs also said they purchased generators to ensure continuity of operations but can still face challenges navigating persistent power outages. For example, officials at one HSI said they do not have enough generators to ensure power to all buildings during periodic power outages. As a result, they prioritize generator use for the science buildings, as those buildings facilitate research that brings revenue to the university. Officials also told us the school does not have enough generators to simultaneously power these science buildings and the heating, ventilation, and air conditioning system on campus.

Source: GAO site visits to HSIs. | GAO-24-106162

[35]In September 2017, two major hurricanes—Irma and Maria—struck Puerto Rico, causing billions of dollars in damage to its infrastructure, housing, and economy. Puerto Rico's recovery from these hurricanes has been further complicated by a series of earthquakes in December 2019 and January 2020, with strong aftershocks felt through July 2020. Hurricane Fiona also made landfall in Puerto Rico as a category 1 hurricane in September 2022.

Officials at another HSI said significant flooding from these natural disasters has contributed to their deferred maintenance backlog.[36]

[36]Officials at two of the three HSIs we visited in Puerto Rico said that the timeliness of their Federal Emergency Management Agency (FEMA) fund disbursements delayed their colleges' efforts to repair hurricane damage. In May 2021, we reported that FEMA has not comprehensively identified or assessed the risks that could affect the success of remaining disaster recovery efforts, such as delays related to a lack of subrecipient staff expertise to develop projects for obligation. We recommended that the FEMA administrator, in coordination with the Government of Puerto Rico and relevant federal agencies, identify and assess the risks to the remainder of Puerto Rico's recovery, including internal and external factors, such as Puerto Rico's capacity to carry out projects. As of February 2024, FEMA has not yet taken action to address this recommendation. See GAO, *Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery,* GAO-21-264 (Washington, D.C.: May 19, 2021).

Figure 5: Examples of Lasting Damage from Hurricane Maria at HSIs in Puerto Rico

Room damaged by the hurricane in a facility that continues to support the Reserve Officers' Training Corps.

Medical building that was damaged by the hurricane in 2017 and has not been occupied since.

Damage in a server room sustained from the hurricane.

Source: GAO site visits to Hispanic-Serving Institutions (HSI). | GAO-24-106162

Facility Modernization

According to HSI officials, modernizing their campus facilities to attract students is a key factor in determining capital project needs.[37] Specifically, officials said modernizing academic buildings, residence

[37]Modernization can also reduce deferred maintenance backlogs, such as when a new building replaces an existing building with a deferred maintenance backlog.

halls, and safety and security infrastructure is necessary to meet students' expectations and to remain competitive.

Academic buildings. Officials at five of the 10 HSIs we visited described new academic capital projects underway that can help attract students by providing them with modernized equipment and facilities (see fig. 6).[38] For example, officials at one HSI said they are constructing a new $100 million academic science building. This building will serve over 5,000 students annually and will replace multiple aging facilities, including a science building that is 130 years old and has not been updated in at least 50 years. Officials at the HSI said their current facilities are not suitable for cutting-edge scientific research, cannot support the latest scientific equipment, and generally do not meet the expectations of their students, who typically attended high schools with better equipment.

Figure 6: New Construction of Academic Facilities on HSI Campuses

Source: GAO site visits to Hispanic-Serving Institutions (HSI). | GAO-24-106162

Residence halls. Officials at four of the six HSIs we visited that had residence halls on campus said modernizing their residence halls is

[38]On our survey, we asked HSIs to describe their top three facility capital projects to address their unmet needs over the next 5 years. An estimated 82 percent of HSIs have at least one project with an academic purpose among their top three facility capital projects, based on our survey. The 95 percent confidence interval for this estimate is (75, 87). See appendix II for additional survey results.

important for attracting students.[39] For example, officials at one HSI described plans to construct a new residence hall with facilities to attract new students to attend the institution. Officials at three HSIs told us that the layout of their residence halls need to be modernized to apartment-style living and provide community spaces because their older residence hall designs with communal bathrooms will not attract students (see fig. 7). Additionally, officials at two of the four HSIs that do not offer residence halls said constructing residence halls with affordable housing are a priority for their colleges. Officials at one HSI said this is because some of their students face housing insecurity.

Figure 7: New Housing Facilities on HSI Campus

New housing facility on an HSI campus with modernized facilities.

Source: GAO site visit to Hispanic-Serving Institution (HSI). | GAO-24-106162

Safety and security infrastructure. Officials at four of the 10 HSIs we visited said modernizing their safety and security infrastructure is a top priority for their schools and students. For example, officials at one HSI said they plan to retrofit existing doors with a security access system that will allow the school to centrally manage doors to quickly secure the

[39]Based on our survey, an estimated 23 percent of HSIs are prioritizing student housing capital projects over the next 5 years. The 95 percent confidence interval for this estimate is (17, 30). We also previously reported that officials from Historically Black Colleges and Universities said that student interests in updated residence halls require modern building spaces in order for a college to remain competitive. See GAO-18-455.

campus.[40] Over 20,000 criminal incidents against people and property were reported across all colleges and universities in 2020, according to a recent report from Education and the Department of Justice.[41]

Some HSIs have unmet needs related to their safety and security infrastructure.[42] For example, officials at one HSI said their 911 emergency call infrastructure needs to be modernized.[43] Without this modernization, officials said, the campus police cannot proactively address safety issues. Officials at another HSI showed us an outdated emergency response system in their clinical rooms that students use to provide mental health services to the community (see fig. 8). Officials said this critical system is at risk of malfunctioning and needs to be replaced because it allows student trainees to communicate with security when there is an urgent safety concern with their client. These safety concerns can occur two to three times a week, but the HSI has not been able to address this security infrastructure need.

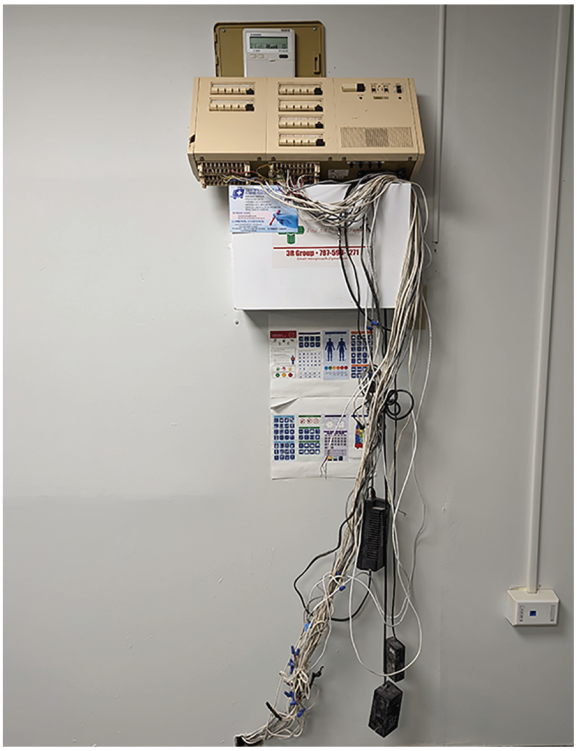
[40]According to officials, this project will cost $6 million.

[41]See Education and Department of Justice, *Report on Indicators of School Crime and Safety: 2022*, NCES 2023-092 and NCJ 307328, (Washington, D.C.: Sept. 2023), 26. https://bjs.ojp.gov/library/publications/report-indicators-school-crime-and-safety-2022-and-indicator-2-incidence.

[42]Based on our survey, an estimated 13 percent of HSIs are prioritizing security capital projects over the next 5 years to address their unmet needs. The 95 percent confidence interval for this estimate is (8, 19).

[43]According to the Federal Communications Commission, E911—or Enhanced 911—systems automatically report the telephone number and location of 911 calls made from wireline phones.

Figure 8: Example of Outdated Emergency Response Infrastructure at an HSI



Outdated emergency response system used for clinical rooms at an HSI placed on top of a box containing first-aid supplies. According to officials, this system is at risk of malfunctioning and needs to be replaced because it allows student to communicate with security when there is an urgent safety concern with their client, which can occur two or three times a week.

Source: GAO site visit to Hispanic-Serving Institution (HSI). | GAO-24-106162

HSIs Are Investing in Digital Infrastructure but Reported Unmet Needs for Better Internet Access, Cybersecurity, and Hybrid Learning Technology

Digital infrastructure is vital for colleges as students are increasingly learning in digital formats and online.[44] Digital infrastructure facilitates students' learning by providing the physical and virtual components necessary to support digital technology. HSIs are prioritizing investments in digital infrastructure projects that support internet access and connectivity, cybersecurity operations, and hybrid learning, according to our survey and interviews with HSI officials.

HSIs Have Addressed Some Internet Access and Connectivity Needs, but Challenges Remain

HSIs have invested in internet access and connectivity in recent years, in part to address the challenges students had participating in classes when they suddenly had to transition to remote and hybrid learning during the COVID-19 pandemic. However, HSIs reported that further investments are needed. Based on our survey, an estimated 65 percent of HSIs are prioritizing digital infrastructure projects to address access and connectivity needs over the next 5 years.[45]

Internet Access for Students

Students at HSIs can face challenges with accessing the internet off-campus.[46] Based on our survey, at roughly a third of HSIs, more than 10 percent of students face difficulties connecting to the internet off-campus either because they cannot afford an internet connection or because they lack an appropriate device.[47] These challenges were exacerbated during the early stages of the COVID-19 pandemic in 2020, when many colleges shifted from in-person classes to remote learning. For example, officials

[44]For the purpose of this report, we define digital infrastructure as the physical and virtual assets related to disseminating and adopting digital technologies for learning, such as mobile and internet communications, equipment for hybrid learning, data centers, and fiber networks.

[45]On our survey, we asked HSIs to describe their top three digital infrastructure projects to address their unmet needs over the next 5 years. An estimated 65 percent of HSIs have at least one digital infrastructure project to address internet access and connectivity needs among their top three digital infrastructure projects over the next 5 years, based on our survey. The 95 percent confidence interval for this estimate is (58, 72). See appendix II for additional survey results.

[46]A 2022 report from the Office of Minority Broadband Initiatives at the National Telecommunications and Information Administration found that students at minority-serving institutions such as HSIs can face internet access barriers related to affordability and access to devices. See Office of Minority Broadband Initiatives, *2022 Report,* (Washington, D.C.: Oct. 2022).

[47]Specifically, we estimate that 34 percent of HSIs face these challenges. The 95 percent confidence interval for this estimate is (26, 41). On our survey, we asked HSIs to select a range estimate for the percentage of students living off-campus who are currently unable to reliably connect to the internet at home to complete coursework because they either cannot afford internet access or they do not have an adequate device (e.g., laptop) to connect to the internet off-campus. See appendix II for additional survey results.

from three of the 10 HSIs we visited told us their students had to complete coursework in campus parking lots where they could use the institution's Wi-Fi because they did not have internet access at home. According to a 2020 national survey conducted by the nonprofit Digital Promise, Hispanic students more often reported experiencing internet access issues often or very often (an estimated 23 percent) compared to non-Hispanic White students (an estimated 12 percent).[48]

These internet access barriers persist even with recent investments with COVID relief funds. Officials at all 10 HSIs we visited said they used a portion of their COVID relief funds to provide students with equipment (such as hotspots and laptops) to help them obtain internet access and complete coursework during the pandemic.[49]

According to our analysis of Education's COVID relief fund data, 87 percent of HSIs reported that COVID relief funds enabled their college to keep students enrolled by providing them with electronic devices and internet access, compared to 68 percent of non-HSIs. However, some HSIs may face challenges in continuing to provide students with equipment to enable internet access off-campus. Officials at four of the 10 HSIs we visited stated that their institution will not be able to sustain this support once COVID relief funding is exhausted.[50] As a result, some students will lose access to stable internet to complete their coursework at home.

[48]B. Means and J. Neisler with Langer Research Associates, *Suddenly Online: A National Survey of Undergraduates During the COVID-19 Pandemic*, Digital Promise, https://digitalpromise.dspacedirect.org/items/32aee7c4-5363-4d50-bc9c-a338e7dfac7e. The margin of error in this study for Hispanic student estimates is no greater than plus or minus 6.3 percentage points and the margin of error for non-Hispanic White students is no greater than plus or minus 3 percentage points at the 95 percent level of confidence.

[49]Colleges could also use COVID relief funds to subsidize the cost of high-speed internet for their students and faculty to transition to an online environment. According to our analysis of Education's COVID relief fund data, 40 percent of HSIs reported using COVID relief funds to provide or subsidize the costs of high-speed internet to students or faculty for this purpose. Some HSIs are part of school systems that reported aggregate COVID relief spending data for multiple campuses. We excluded 53 HSIs that did not submit individual reports on their COVID relief funds from our analysis of COVID relief data.

[50]The deadline to expend COVID relief funds was June 30, 2023, but schools can request an extension through June 30, 2024.

Internet Connectivity on Campus

Based on our survey, an estimated 74 percent of HSIs have internet speeds that meet their needs, but 24 percent do not.[51] While colleges may require different internet speeds, a 2022 report from Education cites the definition of high-speed internet as no less than 100 Megabits per second (Mbps).[52] However, we estimate that 30 percent of HSIs have an average internet speed that falls below 100 Mbps, based on our survey.[53] These lower internet speeds would make it difficult for multiple classrooms or students to engage in high-bandwidth activities (like video conferencing) at the same time, according to Education officials. Insufficient internet speed can also limit opportunities for students. Forty-one of the HSIs that responded to our survey said their internet speeds did not meet their needs. Of these HSIs, 31 (or 76 percent) also reported that their slow internet speeds limited their students' ability to complete coursework or restricted their college's course or curriculum offerings.

Additionally, an estimated 22 percent of HSIs do not have sufficient digital infrastructure to enable internet coverage in outdoor spaces on campus, based on our survey.[54] Officials at three of the 10 HSIs we visited told us that they expanded internet coverage outdoors during the pandemic to enhance outdoor teaching and learning capabilities (see fig. 9). Officials at four other HSIs we visited said they would like to expand their internet coverage outdoors but have not done so.

[51]The 95 percent confidence intervals for these estimates are (67, 81) and (17, 31), respectively. An estimated 2 percent of HSIs do not know if their internet speeds meet their needs. The 95 percent confidence interval for this estimate is (1,6).

[52]See Education, *Advancing Digital Equity for All: Community-Based Recommendations for Developing Effective Digital Equity Plans to Close the Digital Divide and Enable Technology-Empowered Learning* (Washington, D.C.: Sept. 2022). In 2022, the National Telecommunications and Information Administration (NTIA) reported that colleges can sometimes require more than 1,000 Megabits per second to enable the adequate bandwidth for students, faculty, and staff. See NTIA, *Office of Minority Broadband Initiatives 2022 Report* (Washington, D.C.: Oct. 2022).

[53]The 95 percent confidence interval for this estimate is (22, 38). Colleges can also face challenges in maintaining and continuing to update their digital infrastructure to meet anticipated needs for faster internet speeds in the future. For example, officials at one HSI we visited said that their current internet speeds of 1,000 Megabits per second were adequate now but will be insufficient in 5-10 years. Officials at another HSI said technology advances faster than they can fund digital infrastructure, and their wireless internet infrastructure will become obsolete if they cannot invest in it.

[54]The 95 percent confidence interval for this estimate is (16, 29).

Figure 9: Examples of Outdoor Spaces on HSI Campuses with Internet Coverage



Source: GAO site visits to Hispanic-Serving Institutions (HSI). | GAO-24-106162

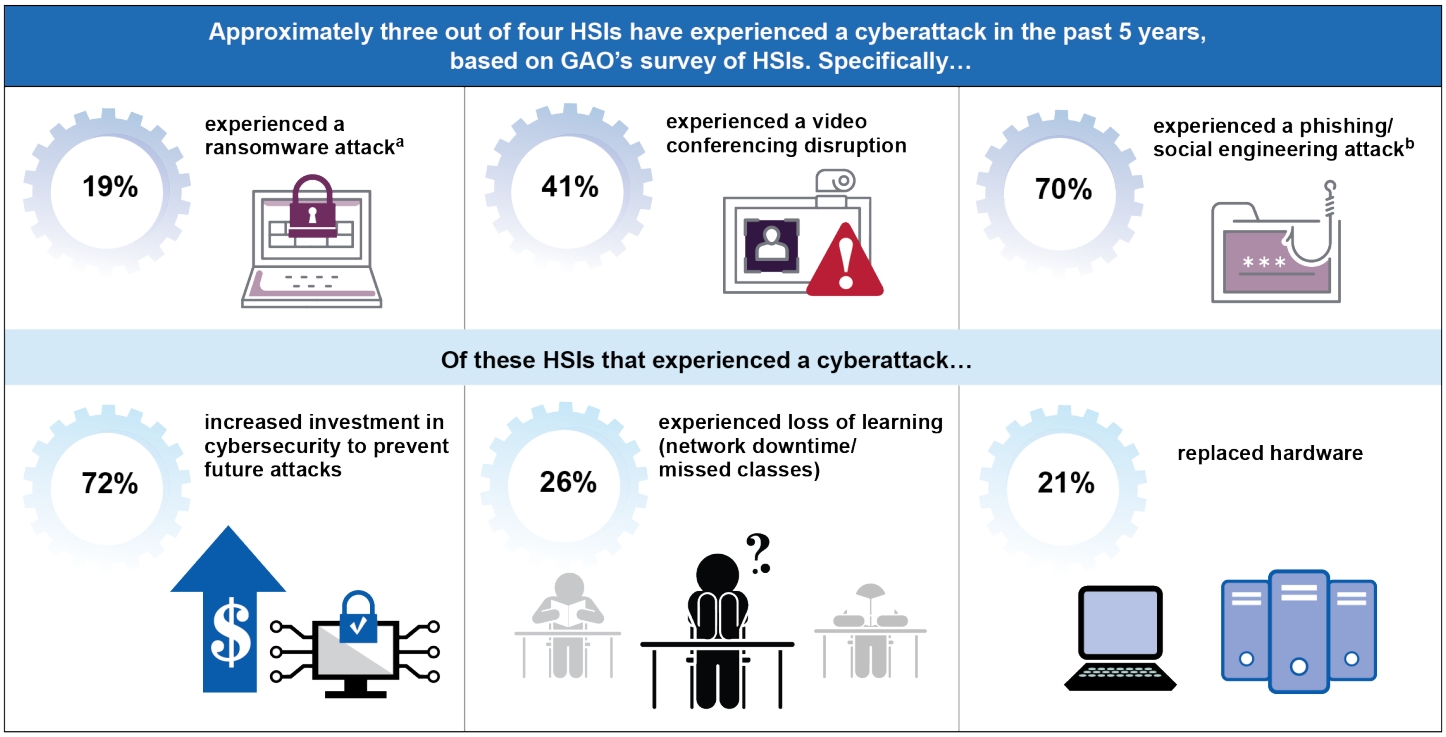
Most HSIs Have Experienced a Cyberattack and Are Making Investments to Mitigate and Prevent Future Attacks

Most HSIs have experienced cyberattacks (such as a ransomware or phishing), which can impact their operations and finances. Based on our survey, we estimate that 74 percent of HSIs have experienced at least one cyberattack within the past 5 years (see fig. 10).[55] According to Education, HSIs—like other colleges—are an attractive target for criminals because they have valuable information, including personal and financial information, research data, and intellectual property.[56] Education officials also said that cyberattacks on colleges have increased in recent years.

[55]The 95 percent confidence interval for this estimate is (67, 81).

[56]According to Education, colleges work in open environments where students, staff, faculty, and visitors are constantly accessing and sharing information online. These open environments have also made colleges targets for cybercrime.

Figure 10: Cyberattacks at HSIs



Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI); images: marinashevchenko/stock.adobe.com. | GAO-24-106162

Notes: Percentages are estimates generated from GAO's nationally generalizable survey of HSIs. The 95 percent confidence intervals for the estimates in the top row from left to right are (13, 26), (33, 49), and (62, 77). The 95 percent confidence intervals for the estimates in the bottom row from left to right are (64, 80), (18, 34), and (14, 29).

[a]Ransomware is a type of malicious software that attempts to block access to a data system and demands a fee be paid in exchange for restoring access.

[b]Phishing is an attempt to acquire data or other resources through a fraudulent solicitation in email or on a website in which the actor pretends to be a reputable person or business. Similar to phishing, a social engineering attack occurs when an attacker obtains sensitive information or data through impersonation of a person.

Cyberattacks can have wide-ranging impacts on HSIs, including financial and operational consequences. Ransomware attacks—which affected an estimated 19 percent of HSIs in the last 5 years—can be particularly costly to colleges.[57] Education has cited the average cost of a

[57]The 95 percent confidence interval for this estimate is (13, 26).

Types of Cyberattacks in the Education Sector

Bad actors can target colleges by using various methods, such as:

Phishing: an attempt to acquire data or other resources through a fraudulent solicitation in email or on a website in which the actor pretends to be a reputable person or business.

Ransomware: a type of malicious software that attempts to block access to a data system and demands a fee be paid in exchange for restoring access. The attacker may also sell access to valuable student data to another malicious actor.

Distributed Denial-of-Service: an attack that prevents or impairs the authorized use of networks, systems, or applications by exhausting resources.

Video Conferencing Disruptions: disruptions of teleconferences and online classrooms, often with pornographic or hate images and threatening language.

Source: GAO, Critical Infrastructure Protection: Additional Federal Coordination is Needed to Enhance K-12 Cybersecurity, GAO-23-105480 (Washington, D.C.: Oct. 20, 2022). | GAO-24-106162

ransomware recovery in the education sector at $2.73 million.[58] Cyberattacks can also impact a college's ability to operate.[59] For example, officials at one HSI described how a cyberattack resulted in the college being offline for 5 days, and said it took a month to fully resolve.

HSIs are prioritizing digital infrastructure projects that prevent and mitigate cyberattacks, according to our survey and interviews with HSI officials. Based on our survey, we estimate 63 percent of HSIs are prioritizing cybersecurity among their top digital infrastructure projects over the next 5 years to address unmet needs.[60] These planned projects include fraud detection, security incident and event monitoring, and replacing server infrastructure. The majority of HSIs that have experienced a cyberattack have responded by devoting more resources to cybersecurity efforts. Specifically, an estimated 72 percent of HSIs that have experienced a cyberattack in the past 5 years have increased their investment in cybersecurity to prevent future attacks.[61] See the textbox for an example of one HSI's response to a cyberattack.

A Cyberattack's Impact on One HSI

Officials at one HSI described a ransomware attack that encrypted their computers and servers, causing over half of their campus operations to shut down for 3 days, just before the fall semester started. The HSI did not pay the ransom and worked through the lasting effects of the attack for 2 months. Following the cyberattack, the college conducted training to educate students, staff, and faculty about cybersecurity risks. While hiring an internal cybersecurity expert is one of the college's priorities, officials said it can be difficult to fill these positions that require specialized expertise. For now, the college contracts with an external cybersecurity expert.

Source: GAO site visit to Hispanic-Serving Institution (HSI). | GAO-24-106162

[58]Education, *Cybersecurity Updates June 2022*, https://fsapartners.ed.gov/sites/default/files/attachments/2022-08/H-177_Cybersecurity_Updates_June_2022_AB_FINAL.pdf.

[59]Based on our survey, an estimated 19 percent of HSIs that experienced a cyberattack lost access to critical systems and data. The 95 percent confidence interval for this estimate is (12, 27). See appendix II for additional survey results.

[60]On our survey, we asked HSIs to describe their top three digital infrastructure projects to address their unmet needs over the next 5 years. An estimated 63 percent of HSIs have at least one digital infrastructure project to address cybersecurity needs among their top three digital infrastructure projects, based on our survey. The 95 percent confidence interval for this estimate is (56, 71). See appendix II.

[61]The 95 percent confidence interval for this estimate is (64, 80).

HSIs Have Invested in Hybrid Learning Technology but Identified Additional Needs

HSIs invested in digital infrastructure to enable remote learning during the COVID-19 pandemic. Nearly all HSIs currently offer hybrid learning, which provides their students flexibility in attending classes in-person or remotely.[62] Since the sudden shift to remote learning at the onset of the pandemic, hybrid learning has become widespread as students return to the classroom.[63]

Based on our survey, we estimate that 96 percent of HSIs currently offer hybrid learning, which requires investments in equipment such as cameras, microphones, and projectors (see fig. 11 and sidebar).[64] According to our analysis of COVID relief fund data, 79 percent of HSIs reported using a portion of their COVID relief funds to invest in remote learning equipment.[65] Officials from one HSI told us that without COVID relief funds, it would have taken them over a decade to make the necessary investments to provide hybrid learning for students.

[62]Hybrid learning generally involves a mix of in-person and virtual instruction so that students can attend on campus or remotely.

[63]According to an Education document, the COVID-19 pandemic highlighted the need for higher education institutions to expand the use of remote and hybrid technologies to help students reach their goals. See Education, *Summary of Distance Education and Innovation Final Rule* (Washington, D.C.: Sept. 2, 2020).

[64]The 95 percent confidence interval for this estimate is (92, 99).

[65]Specifically, HSIs reported the extent to which they used COVID relief funds in 2021 to purchase, lease, or rent equipment or software to enable remote learning, which generally can also be used to support hybrid learning.

Figure 11: Examples of Hybrid Learning Technology in HSIs' Classrooms

Hybrid learning technology being installed into classroom

Classroom with hybrid learning technology installed

Source: GAO site visits to Hispanic-Serving Institutions (HSI). | GAO-24-106162

Impact of Hybrid Learning Infrastructure in the Classroom

One HSI we visited invested in advanced technology for classrooms to allow students to participate in classes in-person or at home. This technology includes microphones, multiple cameras, projectors, and podiums for the professor to control the technology. This technology gives students more flexibility and has increased student participation, according to HSI officials. These upgrades have also increased the maximum capacity of in-demand courses by allowing more students to log in virtually. Officials said that before this investment in digital infrastructure, courses with high demand often filled up quickly due to the limited physical classroom space, causing some students to delay their graduation.

Source: GAO site visit to Hispanic-Serving Institution (HSI). | GAO-24-106162

Despite recent investments, HSIs may face challenges in effectively delivering hybrid learning. Based on our survey, we estimate 90 percent of HSIs that currently offer hybrid learning face at least one technological or financial challenge in continuing to deliver hybrid courses.[66] For example, an estimated 69 percent of HSIs that currently offer hybrid learning cited challenges related to limited IT personnel.[67] Officials at five of the 10 HSIs we visited said offering hybrid learning is critical for attracting students to their college in the future. However, the cost of continuing to offer hybrid technology can be a challenge. Based on our survey, we estimate that 57 percent of HSIs offering hybrid learning lack funds to maintain this investment and 49 percent lack funds to invest in technology to continue to deliver hybrid learning opportunities.[68]

Officials at five of the 10 HSIs we visited described similar concerns with funding their hybrid learning technology. For example, officials at one HSI told us they are concerned about their ability to continue to maintain new hybrid learning equipment funded with COVID relief funds because IT equipment needs to be replaced often and requires sustained investment. The cost of this equipment has also increased for some colleges. For example, officials at one HSI said that the cost for implementing hybrid technology in classrooms has grown from $18,000 per classroom to about $25,000 since the COVID-19 pandemic started. Officials said these increased costs are due to supply chain issues and high demand among colleges for the same type of technology.

HSIs Rely on a Variety of Nonfederal Funding Sources to Address Capital Project Needs

[66]The 95 percent confidence interval for this estimate is (84, 94).

[67]The 95 percent confidence interval for this estimate is (62, 77). Based on our survey, an estimated 48 percent of HSIs that currently offer hybrid learning face challenges accessing technology to enable hybrid learning and an estimated 27 percent of HSIs that currently offer hybrid learning cite inadequate wireless internet speed as a challenge. The 95 percent confidence intervals for these estimates are (40, 56) and (20, 34), respectively. See appendix II for additional survey results.

[68]The 95 percent confidence interval for these estimates are (49, 65) and (41, 57), respectively.

HSIs Reported They Rely on a Variety of Funding Sources to Address Capital Project Needs

HSIs relied on multiple funding sources to address capital project needs over the last 5 years, according to our survey.[69] The most common funding sources are bonds for public HSIs and tuition and fees for private HSIs. However, based on our survey, an estimated 93 percent of HSIs use more than one source to fund their capital project needs.[70]

Funding capital projects can be difficult due to their high cost. For example, the estimated median cost of an HSI's top three facility projects for the next 5 years is about $41 million, based on our survey.[71] The costs of these capital projects have also increased rapidly due to inflation, which was a commonly cited challenge by HSIs in our survey. We estimate that 91 percent of HSIs faced challenges funding projects because of increased construction costs due to inflation, based on our survey.[72]

Capital projects can take years to complete and rising inflation can make it difficult to anticipate capital project costs. Officials from six of the 10 HSIs we visited said their college had to rescope or cancel capital projects due to unexpected increases in costs. For example, officials at one HSI we visited told us that they originally received funding to complete a $600,000 renovation of the school's sports complex. However, after the pandemic, the cost of the project increased to $850,000 due to rising costs of labor and materials. As a result, the university had to abandon this project.

However, not all HSIs face challenges funding capital projects. For example, officials at one HSI we visited told us they have had success over the last 10 years raising funds for capital projects due to an active and engaged alumni and donor base. We estimate that 43 percent of HSIs have some degree of satisfaction with their ability to access funding

[69]We analyzed the funding sources that HSIs used to finance both facility and digital capital projects.

[70]The 95 percent confidence interval for this estimate is (88, 96).

[71]The 95 percent confidence interval for this estimate is ($27.2 million, $58.4 million).

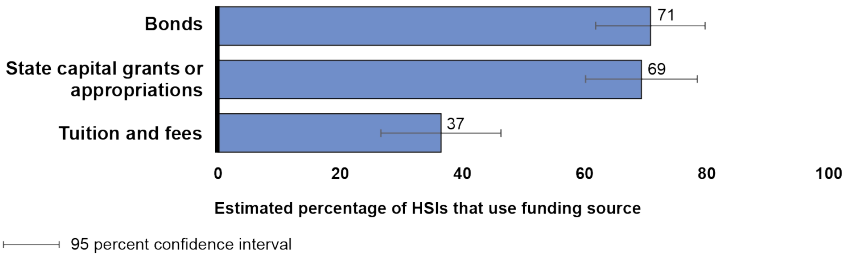
[72]The 95 percent confidence interval for this estimate is (86, 95). We previously reported that inflation from fiscal year 2017 through 2022 effectively eroded the purchasing power of maintenance and repair funding by about 26 percent, particularly in the past several years. Put another way, $1 million in funding in fiscal year 2022 would only accomplish what $740,313 would have accomplished in fiscal year 2017. GAO, *Federal Real Property: Agencies Should Provide More Information about Increases in Deferred Maintenance and Repair*, GAO-24-105485 (Washington, D.C.: Nov.16, 2023).

for their capital project needs, based on our survey.[73] Nevertheless, based on our survey, we also estimate that 65 percent of HSIs face five or more financing challenges, such as lack of flexibility in using funds and declining tuition and fees revenue.[74]

Funding Sources Used by Public HSIs

According to our survey, over the past 5 years, public HSIs have frequently relied on bonds and state capital grants or appropriations to fund capital projects.[75] Tuition and fees are also a common source of funding (see fig.12).

Figure 12: Most Frequently Reported Capital Project Funding Sources in the Last 5 Years for Public HSIs, 2023



Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI). | GAO-24-106162

Bonds. Based on our survey, an estimated 71 percent of public HSIs relied on bonds—such as state issued bonds, local bonds, or bonds

[73]Conversely, an estimated 42 percent of HSIs have some degree of dissatisfaction with their ability to access funding for their capital project needs. The 95 percent confidence interval for these estimates is (35, 51) and (34, 49), respectively. Of the remaining 15 percent of HSIs, 13 percent were neither satisfied or unsatisfied and 2 percent reported they did not know. The 95 percent confidence interval for these estimates is (7, 22) and (0, 8), respectively.

[74]The 95 percent confidence interval for this estimate is (57, 72). Survey respondents were able to select from the following options: increased construction costs due to inflation, lack of federal funds to support capital projects, insufficient state/territory funds for capital projects, insufficient local taxpayer support for capital projects, deferred maintenance backlog is too large to support other capital projects, insufficient access to bond markets or loans, inconsistent funding frequency, lack of flexibility for use of funds, declining tuition and fees revenue, and other. For more information on our methodology, see appendix I.

[75]See appendix II for the results of all surveyed funding sources. We asked survey respondents to select each funding source used in the last 5 years to support capital project needs.

issued by the institution—to fund capital projects.[76] Four of the six public HSIs we visited told us they used bonds to fund portions of their capital projects including residence halls and new applied technology buildings. However, some HSIs face challenges securing bonds. Based on our survey, an estimated 13 percent of public HSIs face challenges accessing bond markets.[77] Additionally, some HSIs must rely on the passage of local bond measures to support their capital projects. However, we estimate that 33 percent of public HSIs consider insufficient taxpayer (i.e., voter) support to fund capital projects to be a challenge, based on our survey.[78] For example, officials from one community college HSI we surveyed reported that many buildings on their campus have been neglected because a bond measure to fund their capital project needs failed to pass.

State capital grants or appropriations. Public HSIs have also frequently used state capital grants or appropriations—such as one-time grants for new construction or annual appropriations for repairs—to address their capital project needs in the past 5 years. Based on our survey, an estimated 69 percent of public HSIs relied on state capital grants or appropriations to fund capital projects.[79] However, almost three quarters (an estimated 74 percent) of public HSIs consider insufficient state funding to be a challenge in addressing their capital project needs, based on our survey.[80]

[76]The 95 percent confidence interval for this estimate is (62, 80).

[77]The 95 percent confidence interval for this estimate is (7, 21). We previously reported that other minority-serving institutions that lack access to the bond market may pay more to issue a bond or face a harder time finding investors. Colleges may lack access to the bond market due to low credit scores, among other reasons. See GAO-18-455.

[78]The 95 percent confidence interval for this estimate is (24, 43).

[79]The 95 percent confidence interval for this estimate is (60, 79).

[80]The 95 percent confidence interval for this estimate is (64, 82).

Insufficient State Funding for Capital Projects

Above, these aging cooling towers are reaching the end of their lifecycle (about 25 years) and are critical to operating campus facilities.

Officials from one public HSI we visited told us state funds were insufficient to meet their facility infrastructure needs. The college was initially allotted funding from the state to replace the school's aging cooling towers, which are vital to operating the school during hot summer months and protecting sensitive equipment from heat damage. However, officials said the state took back a significant amount of funding in 2023. Their budget for the capital project decreased from $4.1 million to $1.7 million, which was insufficient to complete the project. Because construction had already begun, the college had to cut back other essential projects to cover the cost difference.

Source: GAO site visit to Hispanic-Serving Institution (HSI). | GAO-24-106162

Although state funding for higher education has increased nationally for 10 consecutive years, most states have not yet returned to the inflation-adjusted funding levels from before the 2008 Great Recession, according to a report by the State Higher Education Executive Officers Association.[81] Officials at one HSI told us that the lack of sufficient state funds requires them to cancel or cut back essential projects and defer needed repairs (see sidebar for example). Based on our survey, an estimated 81 percent of the public HSIs that relied on state funding also faced challenges addressing their capital project needs due to a general lack of flexibility regarding funding.[82] For example, officials from one public HSI told us that they are restricted to using state funds to repair or maintain existing buildings and cannot use these funds to meet their needs for new construction projects, such as new security systems and parking lot construction.

Tuition and fees. We estimate that 37 percent of public HSIs relied on tuition and fees to fund capital projects over the last 5 years, based on our survey.[83] Tuition and fees can be a shrinking source of capital funding

[81]Of the 21 states and District of Columbia that have experienced lower expenditures since 2021 according to the report, we identified five that have at least one public HSI. State Higher Education Executive Officers Association, *State Higher Education Finance: FY 2022*, (Washington, D.C.: May 2023).

[82]The 95 percent confidence interval for this estimate is (70, 89).

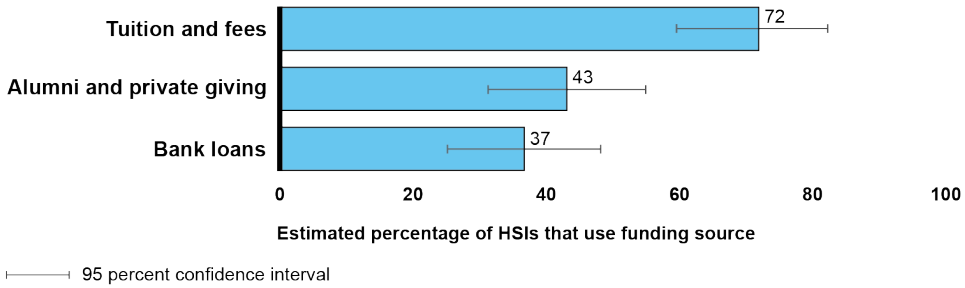
[83]The 95 percent confidence interval for this estimate is (27, 46).

because of declining enrollment.[84] Based on our survey, an estimated 52 percent of public HSIs cited declining tuition revenue as a challenge to funding capital projects.[85] The COVID-19 pandemic brought an overall decline in enrollment at HSIs, and the declines were particularly prevalent at 2-year public institutions. Enrollment at 2-year public HSIs declined by about 560,000 students, or 23 percent, from 2019 to 2021 (the most recent data available), according to our analysis of IPEDS data.[86] Officials at two of the six public HSIs we visited told us they anticipate that decreased enrollment will negatively affect their overall funding. For example, officials at one public HSI told us they receive funding based on the number of enrolled students and expect a significant budget decrease because enrollment has decreased by 25 percent since the pandemic.

Funding Sources Used by Private HSIs

According to our survey, over the past 5 years, private HSIs frequently relied on tuition and fees and alumni and private giving to fund capital projects (see fig.13).[87]

Figure 13: Most Frequently Reported Capital Project Funding Sources in the Last 5 Years for Private HSIs, 2023



Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI). | GAO-24-106162

[84]Tuition rates at public HSIs are also generally lower than public non-HSIs. Based on our analysis of IPEDS data, public HSIs' median tuition is almost 32 percent less than the price of similarly matched public non-HSIs. These estimates are statistically significant at the $p<0.05$ level. For more information about our methodology, see appendix I.

[85]The 95 percent confidence interval for this estimate is (42, 62).

[86]Over this same period, enrollment at non-HSI 2-year public institutions declined by 12 percent. In contrast, enrollment at public 4-year HSIs increased by about 200,000 students, or 10 percent, over this same period. Enrollment at non-HSI 4-year public institutions decreased by about 6 percent over this same period.

[87]See appendix II for the results of all surveyed funding sources.

Tuition and fees. Most private HSIs used tuition and fees as a source for funding capital projects to a greater extent than public HSIs. Based on our survey, an estimated 72 percent of private HSIs used tuition and fees to address their capital project needs over the last 5 years.[88] Furthermore, private HSIs are more dependent on tuition and fees for their overall revenue than private non-HSIs. According to our analysis of IPEDS data that compared HSIs to matched non-HSIs, in the school year from 2020-2021, the proportion of private HSIs' median revenue from tuition and fees is 65 percent, compared to 47 percent of matched private non-HSIs.[89]

Private HSIs' ability to fund capital projects is potentially sensitive to changes in their enrollment because of this dependence on tuition and fees. Based on our survey, an estimated 77 percent of private HSIs cite declining revenue from tuition and fees as a challenge to funding capital projects.[90] This aligns with our 2018 report, which found that reliance on tuition and fees to address capital project needs—in addition to other expenses such as operations and academics—can strain a college's finances.[91] Officials from two of the four private HSIs we interviewed told us that because they are so dependent on tuition for revenue, any drops in enrollment or slower growth can negatively impact their capital funding. Specifically, officials from one private HSI said over 85 percent of their total revenue comes from tuition and fees. That college can no longer maintain its current facilities properly because their enrollment has declined 23 percent since 2016.[92]

[88]The 95 percent confidence interval for this estimate is (60, 82).

[89]These percentages include revenue from tuition and fees after deducting discounts and allowances and institutional aid and are statistically significant at the $p<0.05$ level. Using an exact matching procedure, in the school year 2020-2021, we matched HSIs with non-HSIs on four key characteristics. For more information about our methodology, see appendix I. For additional analysis results, see appendix III.

[90]The 95 percent confidence interval for this estimate is (65, 87). Across all private HSIs, enrollment decreased by nearly 10,000 students, a 3 percent decrease, from 2019 to 2021, according to our analysis of IPEDS data.

[91]GAO-18-455.

[92]Private HSIs may face challenges raising tuition and fee revenue, in part, because a large proportion of the students at these HSIs are low income and rely more heavily on federal student aid. Our analysis of IPEDS data found a higher median proportion of students at private HSIs received Pell Grants in the 2020-21 school year compared to similar private non-HSIs—46 percent and 35 percent, respectively. These figures are statistically significant at the $p<0.05$ level.

Alumni and private giving. Based on our survey, an estimated 43 percent of private HSIs relied on alumni and private giving to fund capital projects.[93] For example, officials at one of the private HSIs we visited used private giving to fund the construction of a campus center. These officials said identifying as an HSI can help with fundraising efforts since most current donors resonate with the school's commitment to providing academic opportunities to Hispanic students. However, HSIs have challenges using donor funds because donors may only want to fund certain types of capital projects. Based on our survey, an estimated 63 percent of private HSIs cited that a general lack of flexibility with funds makes it difficult to fund capital projects.[94] For example, officials at one HSI told us that private donors want to fund new state-of-the-art buildings rather than more urgent needs, such as renovation or deferred maintenance projects. On the other hand, not all HSIs have access to alumni and private giving funds. Officials at two of the four private HSIs we visited said that they do not rely on alumni and private giving to fund capital projects. For example, officials at one private HSI we visited said they did not have the capacity to cultivate alumni and private giving initiatives. Officials at another private HSIs told us they have a limited alumni base and rarely receive enough alumni or private giving to fund capital projects.

HSI Endowments

Although HSIs relied on a variety of funding sources, endowments are not a significant funding source for capital projects, in part because about one in four HSIs do not have an endowment, according to our analysis of IPEDS data.[95] Based on our survey, an estimated 86 percent of HSIs did not use any endowment funds to support capital projects in the last 5 years.[96] According to our analysis of IPEDS data of all HSIs for the 2020-2021 school year, nearly half of HSIs do not have an endowment or have

[93]The 95 percent confidence interval for this estimate is (31, 55).

[94]The 95 percent confidence interval for this estimate is (52, 75).

[95]Endowments are defined as institutional funds that, under the terms of a gift agreement, cannot be entirely spent by the institution on a current basis. We previously reported that colleges with small or no endowments may also face challenges accessing other funding sources. GAO-18-455.

[96]The 95 percent confidence interval for this estimate is (79, 91).

an endowment of less than $5 million, which may not be large enough to contribute to capital projects.[97]

Officials from seven of the 10 HSIs we visited said they use their endowments to fund student scholarships, faculty positions, or other expenses instead of capital projects. Our analysis of IPEDS data shows that in the 2020-2021 school year, HSIs median endowments were about the same size as similarly matched non-HSIs at $4.6 million and $4.4 million, respectively (see table 2).[98] We reported in 2010 that certain types of institutions with high minority enrollment had smaller endowments when compared to other schools.[99]

Table 2: Median Endowments for HSIs, Matched Non-HSIs, and HSIs in Puerto Rico, 2020-21 School Year

(Median figures)	HSIs (excluding Puerto Rico)	Matched Non-HSIs	HSIs-Puerto Rico
Total endowment	$4.6 million	$4.4 million	$0
Endowment per student	$1000	$1400	$0

Source: GAO analysis of data on Hispanic-Serving Institutions (HSIs) and non-HSIs from Education's Integrated Postsecondary Education Data System. | GAO-24-106162

Notes: GAO matched HSIs with non-HSIs on four key characteristics: sector (i.e., public, or private nonprofit (private)), highest degree offered, size (enrollment), and location. Puerto Rico is reported separately because there were no comparable non-HSIs in Puerto Rico. Neither total endowment nor endowment per student is statistically significant at the $p<0.05$ level, meaning there is no statistically significant difference between the reported values.

[97]Specifically, 27 percent of HSIs do not have an endowment, and an additional 21 percent of HSIs have an endowment of $5 million or less.

[98]Endowment estimates are not statistically significant at the $p<0.05$ level. These figures do not include HSIs in Puerto Rico because there were no comparable non-HSIs in Puerto Rico. According to IPEDS 2020-21 data, the mean total endowment for HSIs in Puerto Rico was approximately $328,000 and the median endowment for these institutions was $0. For additional results of the financial characteristics of HSIs in Puerto Rico, see appendix III.

[99]GAO, *Postsecondary Education: College and University Endowments Have Shown Long-Term Growth, While Size, Restrictions, and Distributions Vary,* GAO-10-393 (Washington, D.C.: Feb. 23, 2010).

Federal Funding Is Not a Significant Funding Source of HSI Capital Projects

HSIs generally do not rely on federal funding to address their capital project needs. Education provides grants to eligible HSIs annually and also administered the awarding of billions of dollars to HSIs in COVID relief funds. However, based on our survey, an estimated 67 percent of HSIs saw a lack of federal funds to support capital projects as a challenge to addressing their needs.[100]

HSI grants. Education's three grant programs for eligible HSIs allow funding for construction and building renovation that supports the institution's ability to expand educational opportunities and improve academic attainment for Hispanic students. However, these programs are not a significant source of funding for capital projects.[101] HSI grants are funded through a competitive process, meaning HSIs have to apply and only a limited number are selected.[102] Education awarded new HSI grants to 231 HSIs from fiscal year 2017 to fiscal year 2022, with some colleges receiving multiple grants.[103] Among HSIs that receive grants, the funding is primarily used for student support services, improvement of academic quality, and institutional management, according to Education officials. Only 4 percent of the approximately $1 billion in grantees' total budgeted project costs over the last 6 years was used to address capital project needs.[104] For example, officials at one HSI we visited told us they used HSI grant funds as an initial investment to renovate a large classroom into a STEM Center for students that offers tutoring, study groups, workshops, and an in-house counselor. Recipients of the HSI grants can generally

[100]The 95 percent confidence interval for this estimate is (60, 74).

[101]As previously noted, Education manages three competitive grant programs for colleges that meet the HEA definition of HSI: the Developing HSIs program grant, the Promoting Postbaccalaureate Opportunities for Hispanic Americans grant, and the Developing HSIs – STEM and Articulation program grant. For the purposes of our analysis, we combined all three grants to determine the amount spent on capital projects across all HSI grants available to colleges from Education. For our analysis, we used budget information submitted by grantees at the time of their application, though grantees may adjust their budget appropriations during the award cycle.

[102]Some other minority-serving institution grants, such as the strengthening HBCU program, are automatically awarded to each eligible institution by formula.

[103]Education awarded 471 new grants to HSIs over this same period.

[104]Of those HSIs that received a grant, less than a third (32 percent) used a portion of the grant to fund capital project needs. HSI grants can fund capital projects, such as construction and renovation of instructional facilities, according to program rules. For the purposes of this analysis, we defined capital project needs as federal dollars spent on construction, which is an allowable expense under the HSI grant. Additionally, total budgeted costs of projects may exceed grant funding.

receive a maximum of $5 million over a 5-year grant cycle, which may not be large enough to fund a large capital project in its entirety.

COVID relief funds. Although most HSIs used a portion of their COVID relief funds to support digital infrastructure needs, these funds were not frequently used for capital projects. Education awarded over $1 billion in COVID relief funds to certain HSIs as part of a larger subset of funds available to minority-serving institutions.[105] From March 2022 to June 2023, eligible HSIs and other minority-serving institutions could apply to Education for permission to use these specific funds for renovation and construction projects, activities that were prohibited for other types of COVID relief funds.[106] Thirteen HSIs were approved and funded construction or renovation projects totaling $17.2 million, according to our analysis of approved applications. Of the 111 HSIs that responded to our survey and reported that they did not apply to use COVID relief funds for capital projects, 96 (86 percent) said they preferred to use the funds for other initiatives, such as obtaining additional equipment or software to enable virtual learning. In addition, 49 of the 111 (44 percent) said they had already expended or obligated the funds before flexibilities were introduced in March of 2022.[107]

Agency Comments

We provided a draft of this report to Education for review and comment. Education provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Education and other interested parties. In

[105]Education awarded these funds to eligible grantees of the Developing Hispanic-Serving Institutions program and Promoting Postbaccalaureate Opportunities for Hispanic Americans Program. Some HSIs were also awarded other minority-serving institution funds.

[106]Colleges are generally not allowed to use COVID relief funds on construction, renovation, or real property projects. However, colleges that have received grant funds under one or more of the programs for minority-serving institutions, can apply to Education to use those funds for these purposes. These flexibilities were introduced in The Consolidated Appropriations Act, 2022. Pub. L. No. 117-103, div. H, tit. V, § 530, 136 Stat. 49, 501. The new flexibility does not allow an institution to use its Student Portion, Institutional Portion, or other COVID relief grant funds on construction, renovation, or real property projects.

[107]Not every HSI responded to every question due to survey logic and question non-response.

addition, the report is available at no charge on the GAO website at https://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (617) 788-0534 or emreyarrasm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.

Melissa Emrey-Arras
Director, Education, Workforce, and Income Security Issues

Appendix I: Objectives, Scope, and Methodology

A 2021 House report includes a provision for us to examine the infrastructure needs—both physical and digital—at Hispanic-Serving Institutions (HSI). This report describes (1) HSIs' facility capital project needs, (2) HSIs' digital infrastructure needs, and (3) the funding sources HSIs use to address their capital project needs. To address these objectives, we conducted a nationally representative survey of HSIs, analyzed Department of Education data, visited selected colleges, and interviewed Education officials and other stakeholders. Further, we reviewed relevant federal laws, regulations, and guidance on HSI grant programs.

Survey of HSIs

To address all three objectives, we surveyed a statistical sample of 227 HSIs for the 2020-2021 academic year, the most recent data available at the time of our analysis. We administered our web-based survey from May 1, 2023 through June 21, 2023. To identify the initial population of HSIs we ran a query using Education's Integrated Postsecondary Education Data System (IPEDS) from the 2020-2021 academic year for institutions that met the following characteristics:

- had a full-time equivalent undergraduate student enrollment that was at least 25 percent Hispanic;[1]
- was a public or nonprofit institution;
- offered associates or bachelors degrees that were not exclusively religious degrees;[2]
- participated in Title IV federal programs; and
- was operational at time of query (i.e., not closed).[3]

[1]To calculate full-time equivalent enrollment, we used IPEDS fall enrollment data for race/ethnicity by full and part-time attendance. We converted this data to a full-time equivalent by using weighting factors published by Education's National Center for Education Statistics.

[2]Education excludes institutions that award only religious degrees (e.g., seminary or divinity schools) from Title V funding, which includes HSI grants. Title V prohibits activities provided by institutions, or a department of an institution, whose program is solely to prepare students to become ministers of religion or to enter into some other religious vocation.

[3]The classification used in this report is derived from the Higher Education Act 1965, as amended. The act generally defines an HSI as a public or private nonprofit institution with an enrollment of undergraduate full-time equivalents that is at least 25 percent Hispanic and also meets other eligibility criteria, such as having a certain enrollment of needy students.

To select our survey sample, we stratified the population by sector (i.e., public, private). We designed our sample allocation to support estimation of an attribute measure for each category of HSI with a margin of error no greater than plus or minus 10 percentage points at the 95 percent level of confidence. After adjusting this allocation for an assumed response rate of 60 percent, we obtained a final sample size of 234. Prior to selection of the sample, the population within each stratum was sorted by program length (e.g., 2-year, 4-year). Sampling was done via systematic random selection to ensure that the proportion of 2-year schools and 4-year schools within each stratum matched their distribution in the population. Over the course of survey implementation, we determined that seven colleges in this initial sample did not meet our definition of an HSI, which left us with a final sample size of 227 HSIs.[4]

To develop our survey questions, we interviewed Education officials, college administrators, higher education facilities and digital infrastructure experts, and HSI association officials. We also reviewed and adapted select questions from a prior survey administered by GAO on capital financing of Historically Black Colleges and Universities.[5] Additionally, over video conference, we pretested the survey with five HSIs to standardize survey language and to reduce variability in responses that should be qualitatively the same.[6] We chose the five pretest HSIs to include representation across sector, size, and location. Our survey draft was also reviewed by an internal GAO survey expert. We made changes as appropriate to the survey based on feedback prior to implementation.

We sent selected HSIs a notification email ahead of the survey launch addressed to the president and chief financial officer. We obtained a list of contact information for HSI presidents and chief financial officers from Education's Postsecondary Education Participants System database. In cases where contact information was not available, current, or correct, we identified appropriate contact information by reviewing HSIs' websites or by following up with the president's office. We also provided senior leadership the opportunity to designate an alternate point of contact for

[4]We determined that six of the colleges in our initial sample had closed since the 2020-2021 academic year and that one of the colleges offered only religious degrees.

[5]GAO, *Historically Black Colleges and Universities: Action Needed to Improve Participation in Education's HBCU Capital Financing Program,* GAO-18-455 (Washington, D.C.: June 26, 2018).

[6]Pre-testing the survey draft allowed the team to ensure terminology was used correctly, that questions were clear and unambiguous, and that questions were feasible to answer and not unduly burdensome.

the survey launch. Our survey included questions on capital project needs (i.e., repair or replacement) and plans, digital infrastructure needs, and funding sources HSIs use to address those needs. Given the broad scope, we instructed respondents to consult others with expertise at their college, such as the facilities director and chief information officers, as needed to complete the survey.

We launched the survey on May 1, 2023, and emailed HSI presidents or other designated points of contact a web link to complete the survey. To reduce nonresponses, we sent email reminders encouraging respondents to complete the survey and conducted telephone calls to encourage participation. We obtained a total of 169 responses, or a weighted response rate of 75 percent.[7] Not every HSI responded to every question due to survey logic and question nonresponse. We included for analysis any survey respondent who answered at least 70 percent of the questions on the survey. We carried out a statistical nonresponse bias analysis using available Education data and used post-stratification to adjust the sampling weights for differential rates of response between HSIs of different enrollment size. The estimates from our survey are generated by self-reported data by these respondents. We did not independently verify the responses.

All sample surveys are subject to sampling error—that is, the extent to which the survey results differ from what would have been obtained if the whole population had been observed. Because we followed a probability procedure based on random selections, our sample is only one of a large number of samples that we might have drawn. Since each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95 percent confidence interval. This is the interval that would contain the actual population value for 95 percent of the samples we could have drawn. Confidence intervals are provided with each sample estimate in the report. All survey results presented in the body of this report are generalizable to our population of

[7]We used a weighted response rate because our survey sample incorporates strata with different probabilities of selection. A weighted response rate more accurately reflects the statistical effect of differing probabilities of selection. To calculate our weighted response rate, we used a standard definition, known as RR2, from the American Association for Public Opinion Research. See American Association for Public Opinion Research, *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys, 9th ed.* (2016).

HSIs, except where presented as counts.[8] See appendix II for select survey questions and results.

Education Data

Integrated Postsecondary Education Data System (IPEDS)

To examine the institutional and student characteristics of all HSIs, we analyzed IPEDS data from the 1994-1995 through 2021-2022 school years, the most recent data available at the time of our review. In addition, we used IPEDS financial data reported by colleges for their most recent fiscal year ending before October 1, 2021 (the most recent available) to compare HSI characteristics with a matched set of similar non-HSIs.[9] These characteristics include information on the college's charges for tuition and fees; the percentage of students who receive financial aid overall, and Pell Grants specifically; information on key revenue streams such as tuition and fees, private grants and contracts, and government funding; and data on the college's endowment. Colleges report financial information to IPEDS using different accounting standards. Public colleges generally use standards issued by the Governmental Accounting Standards Board and private colleges use standards issued by the Financial Accounting Standards Board. We assessed the reliability of these data by reviewing related documentation, interviewing officials responsible for maintaining data in the system, and conducting electronic testing of the data, and found the data to be reliable for the purposes of this report.

Creating Matched Sets of HSIs and Non-HSIs

We used a matched analysis to identify non-HSIs that were comparable to HSIs along key characteristics and controlled for potential confounding when estimating differences for the outcome variables of interest. We used the following four criteria to create the matched sets:

[8]Questions that were determined not to be reliable were not reported. For example, we asked surveyed HSIs how much of the total funding for all capital project comes from each reported funding source. However, the results were not generalizable due to lack of responses, and total percentages reported by HSIs often did not equal 100.

[9]Although we primarily reported IPEDS financial data for the 2020-2021 school year, we conducted similar analyses using data back to the 2018-2019 school year. The trends of HSI financial data compared to matched non-HSIs were similar year over year.

Criteria	Grouping
Institution size (based on total students enrolled for credit during the fall of 2019)	Under 1,000; 1,000-4,999; 5,000-9,999; 10,000-19,999; 20,000 and above
Institution sector	Public; private
Highest degree offered	Any degree prior to a 4-year bachelor's degree; a 4-year bachelor's degree; any degree following a 4-year bachelor's degree
HSI state or Census region	States with HSIs or regions (Midwest, Northeast, South, West)

GAO analysis. I GAO-24-106162

Using a multi-stage approach to create matched sets of HSIs and non-HSIs, we first identified non-HSIs that matched the HSI using the institution's size, sector, and highest degree offered. We then constrained the set of non-HSIs to those within the same state as respective HSIs. Each matched set may contain multiple HSIs or multiple non-HSIs. If none of the non-HSIs identified using institution size, sector, and highest degree offered were located within the same state as the HSIs, we used Census-based regions to create the matched set of HSIs and non-HSIs. In the 2020-2021 school year, there were 53 colleges that could not be matched; the majority (84.9 percent) of these schools were in Puerto Rico. Due to our inability to find non-HSI matches within Puerto Rico, all schools in Puerto Rico were excluded from the matching analysis. See appendix III for summary data of HSIs in Puerto Rico.

Table 3 summarizes the number of institutions within each matched set for school year 2020-2021. More HSIs were matched using state than region (423 and 66 matches, respectively).

Table 3: Summary of Hispanic-Serving Institutions (HSI) and Non-HSI Matched Sets

			Number of institutions in matched set			
Matching criteria	**Matched sets (no.)**	**Institution type**	**Total**	**Median**	**Minimum**	**Maximum**
Size, sector, highest degree, region	66	HSIs	**66**	1	1	1
		All other	**309**	3	1	79
Size, sector, highest degree, state	423	HSIs	**423**	1	1	1
		All other	**862**	2	1	27

Source: GAO analysis of data from the Department of Education's Integrated Postsecondary Education Data System, Institutional Characteristics, 2020-21 school year. | GAO-24-106162

We conducted this matched analysis because an unmatched analysis of the HSIs and all non-HSIs is potentially vulnerable to spurious differences in outcomes between HSIs and non-HSIs that arise from an imbalance of key factors underlying these two types of institutions. For example, in 2020-2021, excluding schools in Puerto Rico, public institutions make up a larger proportion of HSIs compared to non-HSIs (72.8 percent to 45.3 percent), while private institutions make up a smaller proportion of HSIs compared to non-HSIs (27.2 percent and 54.7 percent, respectively). This imbalance could lead to differences in outcomes arising from characteristics inherent in the type of institution, not a comparison of HSIs to non-HSIs. Matching HSIs to non-HSIs would lead to a similar underlying distribution of key factors, which improves the comparability of HSIs and non-HSIs.

Outcome Data Analysis

We used the matched sets to compare HSIs to non-HSIs on student financial aid and financial outcomes. For each of these variables and across the matched sets, we estimated descriptive statistics (mean, median, range) for HSIs and non-HSIs. However, in order to compare HSIs to non-HSIs, we accounted for similarities within each matched set. The varying number of HSIs and non-HSIs within each matched set required an analysis which is, in principle, an extension of a paired t-test. In this analysis, differences and correlations within each matched set are accounted for when estimating the overall difference between HSIs and non-HSIs. More specifically, we performed a linear mixed effects model with the basic form—

$y_{ij} = \beta_{ij} HSI_{ij} + b_i + \sigma_{ij}$, for the jth institution in the ith cluster

$b_i \sim N(0, \eta_b^2)$, for the ith cluster

where y is the outcome variable of interest; β is the parameter of interest, the fixed-effect coefficient that quantifies the overall difference between HSIs and non-HSIs; σ is the residual error that is not accounted for by HSI status or clusters; b is the random-effect coefficient that accounts for correlations within clusters; and b is assumed to have a multivariate normal distribution, with a variance of n2.

The p-value estimated was used to assess whether there was a statistically significant difference between HSIs and non-HSIs for the outcome variables of interest.

Education Sector Stratified Sample

We stratified the matched sample by public and private sector and used the model above to obtain estimates specific for public and private colleges. This education sector-specific analysis was not further stratified by 2- and 4-year college types due to small sample sizes.

To further explore differences between public and private colleges, we expanded the model above as such—

$y_{ij} = \beta_{ij} HSI_{ij} + b_i + \sigma_{ij}$, for the jth institution in the ith cluster

where the data was subset between public and private colleges in separate models.

Wilcoxon Test for Clustered Data

The linear mixed effects model above assumes that data are normally distributed (i.e., follow a bell-shaped curve). In order to assess whether these assumptions hold, we performed a Wilcoxon test that is extended for clustered data. The Wilcoxon test ranks values and is free of distributional assumptions, and assumes that all data are independent (i.e., not correlated). Overall consistency between tests of significance from the linear mixed effects model and Wilcoxon tests indicates that model assumptions hold.

HSI Grants Data

To describe the extent to which eligible HSIs used Education's three grant programs (Developing HSIs program, Promoting Postbaccalaureate Opportunities for Hispanic Americans Program grant, and Developing Hispanic-Serving Institutions – Science, Technology, Engineering, or Mathematics and Articulation program) to finance capital facility projects, we analyzed grant data from approved applications from fiscal years 2017 through 2022.[10] Education's G5 database includes information on the approved grantee's proposed budget, including construction expenses. We also used the data to determine the total number of approved HSI grants. We assessed the reliability of this data by interviewing officials responsible for maintaining the data and conducting electronic testing of the data, and we found the data to be reliable for the purposes of this report.

[10]We analyzed budget information submitted by grantees at the time of their application to determine expected spending over the entire award cycle. Using alternative data from these grantees' annual reports to identify actual spending on capital projects would have resulted in an incomplete assessment of total expenditures, since the grants are typically disbursed over 5 years.

COVID Relief Data

To examine how colleges used Higher Education Emergency Relief Funds (COVID relief funds) to support their digital infrastructure, we analyzed data from Education's 2021 provisional annual performance report on the institutional portion of their COVID relief funds and related supplemental funds provided to minority-serving institutions. This report aggregates information colleges were required to report on activities that occurred during the period of January 1, 2021 through December 31, 2021.

To examine the extent to which eligible HSIs used COVID relief funds for construction, renovation, and real property, we reviewed all HSI applications that Education had approved for this purpose and we aggregated the total approved project costs.[11] We assessed the reliability of this data by reviewing related documentation, conducting electronic testing of the data, and interviewing officials responsible for maintaining the data, and we found the data to be reliable for the purposes of this report.

Site Visits and Interviews with HSI Stakeholders

To address all three objectives, we visited 10 HSIs in three states (California, New Mexico, and Texas) and Puerto Rico to interview college administrators and learn about their capital project needs (i.e., repair, renovation, and new construction of buildings), digital infrastructure needs, and the funding sources they used to meet those needs. We also toured their facilities to better understand their facility capital project and digital infrastructure needs. We selected site visit locations to obtain a mix of sectors, enrollment sizes, and locations (e.g., urban, rural). We also focused our selection on states and territories with 20 or more HSIs. During our site visits, we met with senior leadership—such as, presidents, chief financial officers, chief information officers, facilities managers, and HSI grant coordinators. The findings from the site visits are not generalizable to all HSIs but provide illustrative examples of HSIs' facility and digital infrastructure needs and challenges addressing those needs.

We also interviewed Education officials and other stakeholders to learn about HSIs' facility and digital infrastructure needs. Specifically, we interviewed Education officials knowledgeable about HSI grants, cybersecurity, COVID relief funds, and relevant Education databases. We also met with officials from the Hispanic Association of Colleges and Universities and Excelencia in Education. We interviewed an official at the

[11]Real property is generally defined as land and anything constructed on, growing on, or attached to land.

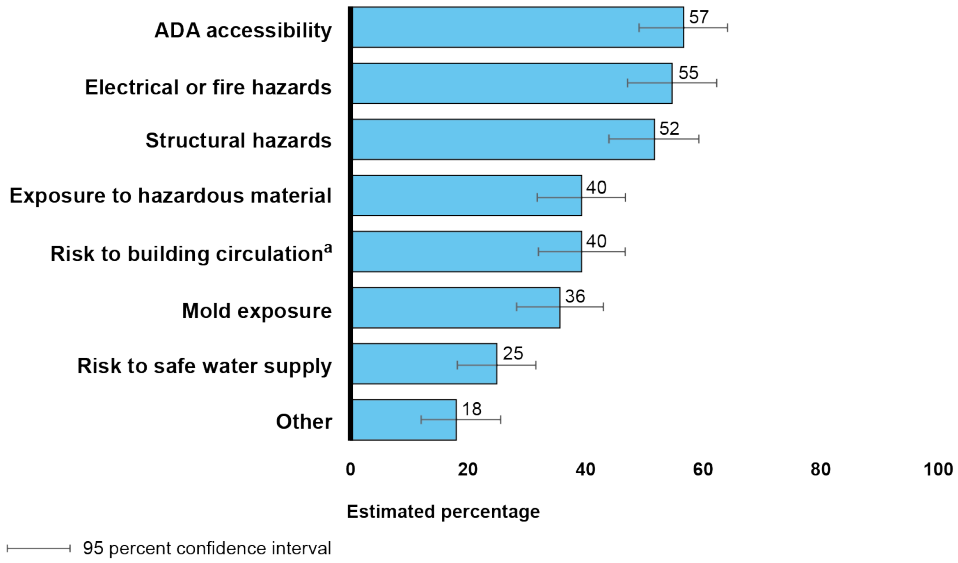
National Association of College and University Business Officers to learn about capital project trends across higher education and what differences, if any, exist for capital funding between HSIs and non-HSIs.

To better understand the digital infrastructure needs of HSIs we met with officials from Internet2 and the Minority Serving Cyberinfrastructure Consortium—organizations that provide services or promote digital infrastructure capabilities to HSIs and other higher education institutions. To further learn about digital infrastructure needs and the challenges facing HSIs, we met with chief information officers from two different colleges who were recommended by EDUCAUSE—an association focused on higher education technology and data.

Appendix II: Additional GAO Survey Results on Facility Capital Projects, Digital Infrastructure, and Funding for HSIs

We surveyed a statistical sample of 227 Hispanic-Serving Institutions (HSI) from May 1, 2023 through June 21, 2023.[1] This appendix presents generalizable results from select survey questions.

Figure 14: HSIs' Recent or Planned Deferred Maintenance Projects that Address Health or Safety Areas



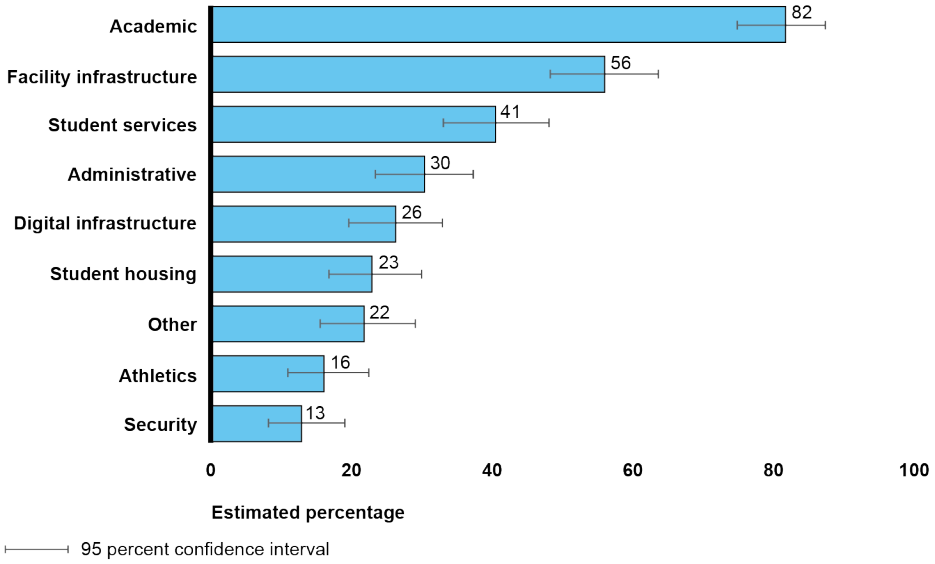
Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI). | GAO-24-106162

Notes: GAO asked HSIs whether any of the institution's recent or planned deferred maintenance projects address health or safety areas. For the purposes of this survey, GAO used the Federal Accounting Standards Advisory Board definition of deferred maintenance, which is maintenance that was not performed when it should have been or was scheduled to be and which was put off or delayed for a future period. Activities include preventive maintenance; replacement of parts, systems, or components; and other activities needed to preserve or maintain the asset. Maintenance and repairs exclude activities directed towards expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, its current use.

[a]Risk to building circulation refers to elements that may inhibit how people move throughout a building.

[1]For the purposes of this report, HSIs are generally defined as public or private nonprofit institutions having Hispanic enrollment of at least 25 percent. For more information about our methodology for identifying HSIs, see appendix I.

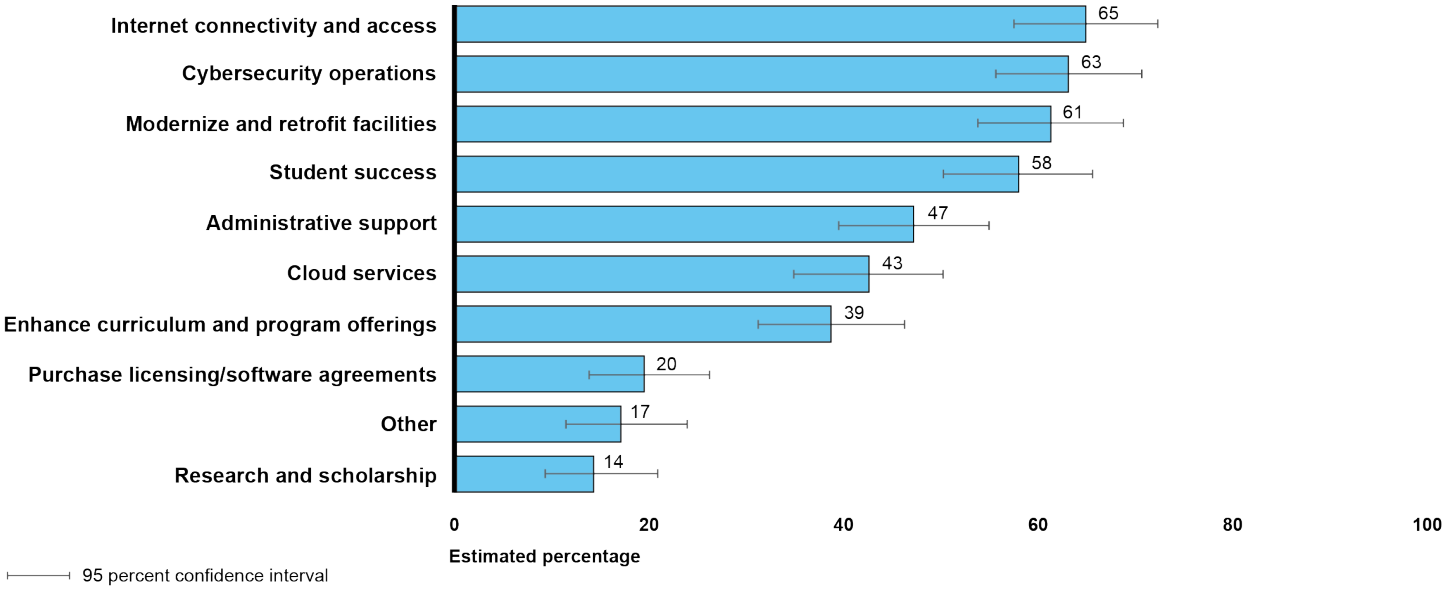
Figure 15: HSIs' Most Frequently Planned Facility Capital Projects by Purpose for the Next 5 Years



Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI). | GAO-24-106162

Notes: GAO asked HSIs to identify their top three capital project priorities (for up to the next 5 years) to address unmet needs and the primary purpose for each project. For the purposes of the survey, GAO defined facility infrastructure as the necessary physical components that allow an entity to function. These components include structures, roads, sidewalks, and utility systems (such as electrical, power, water, and sewer), and support buildings (e.g., maintenance buildings, parking garages). GAO defined digital infrastructure as the physical and virtual assets related to disseminating and adopting digital technologies for learning, including (but not limited to) mobile and internet communications, equipment for hybrid learning, spectrum, macro cell towers, data centers, fiber networks, and small cell networks.

Figure 16: HSIs' Most Frequently Planned Digital Infrastructure Projects by Purpose for the Next 5 Years

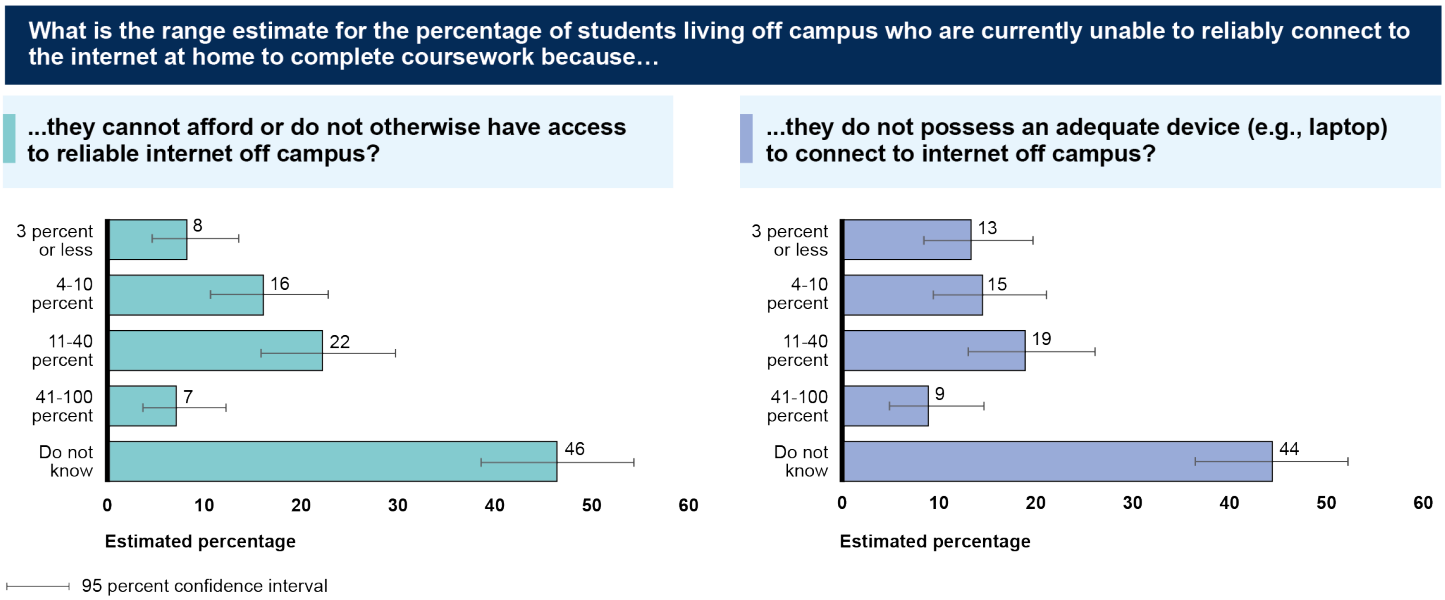


Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI). | GAO-24-106162

Notes: GAO asked HSIs to identify their top three digital infrastructure project priorities (for up to the next 5 years) to address unmet needs and the primary purpose for each project. For the purposes of the survey, GAO defined digital infrastructure as the physical and virtual assets related to disseminating and adopting digital technologies for learning, including (but not limited to) mobile and internet communications, equipment for hybrid learning, spectrum, macro cell towers, data centers, fiber networks, and small cell networks.

Digital infrastructure projects to promote student success can include software or services that track students' academic progress.

Figure 17: Estimated Percentage of Students at HSIs who Are Living Off Campus and Unable to Reliably Connect to the Internet for Various Reasons



Source: GAO analysis of survey of Hispanic-Serving Institutions (HSI). | GAO-24-106162

Notes: GAO asked HSIs to estimate the percentage of students living off campus who are currently unable to reliably connect to the internet at home to complete coursework because (1) they cannot afford or do not otherwise have access to reliable internet off campus and (2) do not possess an adequate device (e.g., laptop) to connect to the internet off campus.

Estimates may not sum to 100 percent due to rounding.

Table 4: HSIs' Funding Sources for Capital Project Needs

Has your institution used any of the following funding sources in the last 5 years to finance capital project needs?						
	Public HSIs			Private nonprofit HSIs		
Funding Source	Estimated percent	95 percent confidence interval—lower bound	95 percent confidence interval—upper bound	Estimated percent	95 percent confidence interval—lower bound	95 percent confidence interval—upper bound
Federal government grants, not including Higher Education Emergency Relief funds (COVID relief funds) or HSI grants	23.4	15.1	33.4	22.3	13.1	34.0
Federal government loans	0.0	0.0	3.1	1.3	0.0	8.3
State capital grants or appropriations	69.3	60.1	78.5	21.6	12.2	33.8
w	70.8	61.7	79.8	22.3	13.2	33.9
Alumni/private giving	32.6	22.9	42.2	43.1	31.2	55.0

Has your institution used any of the following funding sources in the last 5 years to finance capital project needs?						
	Public HSIs			Private nonprofit HSIs		
Funding Source	**Estimated percent**	**95 percent confidence interval—lower bound**	**95 percent confidence interval—upper bound**	**Estimated percent**	**95 percent confidence interval—lower bound**	**95 percent confidence interval—upper bound**
Foundation grants	11.2	5.6	19.4	22.8	13.2	35.0
Institutional foundation	18.3	11.1	27.5	7.9	2.6	17.7
Endowment	7.0	2.6	14.7	15.4	7.8	26.2
Tuition and fees	36.5	26.6	46.4	71.9	59.5	82.3
Public-private partnerships	11.0	5.3	19.5	3.1	0.4	10.9
Bank loans	4.0	0.8	11.2	36.7	25.1	48.3
Other	32.2	21.1	45.0	12.2	4.4	25.3

Source: GAO analysis of survey responses from Hispanic-Serving Institutions (HSI). | GAO-24-106162

Note: The “other” category includes other funding sources reported by survey respondents through open responses. Examples include board of trustee funds, campus reserves, and city grants.

Table 5: HSIs’ Financing Challenges Addressing Capital Project Needs

Has your institution experienced any of the following financing challenges in addressing capital project needs?						
	Public HSIs			Private nonprofit HSIs		
Funding Source	**Estimated percent**	**95 percent confidence interval—lower bound**	**95 percent confidence interval—upper bound**	**Estimated percent**	**95 percent confidence interval—lower bound**	**95 percent confidence interval—upper bound**
Increased construction costs due to inflation (i.e., increased cost in labor or materials)	94.7	88.0	98.3	83.0	71.5	91.2
Lack of federal funds to support capital projects	66.0	56.6	75.5	69.0	56.4	79.8
Insufficient state/territory funds for capital projects	73.6	63.6	82.1	52.3	40.2	64.3
Insufficient local taxpayer support for capital projects	33.3	23.8	42.8	24.6	14.9	36.7
Deferred maintenance backlog is too large to support other capital projects	57.9	48.0	67.8	48.0	36.1	59.9
Insufficient access to bond markets or loans	12.7	6.9	20.9	21.8	12.6	33.7
Inconsistent funding frequency	55.6	45.6	65.6	54.5	42.5	66.6

Has your institution experienced any of the following financing challenges in addressing capital project needs?						
	Public HSIs			Private nonprofit HSIs		
Funding Source	Estimated percent	95 percent confidence interval—lower bound	95 percent confidence interval—upper bound	Estimated percent	95 percent confidence interval—lower bound	95 percent confidence interval—upper bound
Lack of flexibility for use of funds (i.e., funds can only be used for certain projects)	69.4	60.2	78.7	63.3	51.8	74.9
Declining tuition and fees revenue	52.3	42.2	62.3	77.2	65.0	86.7
Other	3.7	0.7	10.6	6.2	1.6	15.4

Source: GAO analysis of survey responses from Hispanic-Serving Institutions (HSI). | GAO-24-106162

Appendix III: Select Institutional, Student, and Financial Data on HSIs

Using financial data from the Department of Education's Integrated Postsecondary Education Data System (IPEDS), we matched Hispanic-Serving Institutions (HSI) and non-HSIs on four key characteristics: sector (i.e., public or private nonprofit (private)), highest degree offered, size (enrollment), and location.[1] The following tables include information about select institutional, student, and financial data for HSIs and matched non-HSIs (see table 6) and this information, by sector (see table 7). We also provide these data for HSIs in Puerto Rico (see table 8), which were not included in the matched analysis. For more information about our methodology, see appendix I.

Table 6: Select Institutional, Student, and Financial Data for Hispanic-Serving Institutions (HSI) and Matched Non-HSIs, 2020-21 School Year

	Sample Size		HSI		Matched non-HSI		Model estimates	Wilcoxon Test
Variable	**HSI**	**Non-HSI**	**Mean outcome**	**Median outcome**	**Mean outcome**	**Median outcome**	**p-value**	**p-value**
Out-of-state average tuition for full-time undergraduates	485	1,121	14,842	11,064	16,498	12,000	.01	0
In-state average tuition for full-time undergraduates	473	1,073	8,724	4,800	11,393	7,920	.11	0
Percent of full-time, first-time undergraduates awarded any financial aid	482	1,141	86	88	88	93	.12	0
Percent of undergraduate students awarded Pell grants	486	1,137	36	35	33	31	0	.01
Tuition reliance[a]	478	1,125	31	26	36	30	.08	0
Government reliance[b]	487	1,126	74	79	66	70	0	0
Private grants and contracts	432	1,018	1,523,784	317,133	1,705,163	663,841	0	0
Endowment, end of year	424	1,012	15,503,231	4,635,484	16,310,342	4,416,894	.01	.34

[1]Financial IPEDS data used for the matching analysis was reported by colleges for their most recent fiscal year ending before October 1, 2021, the most recent data available. For the purposes of this report, HSIs are generally defined as public or private nonprofit institutions having Hispanic enrollment of at least 25 percent. For more information about our methodology for identifying HSIs, see appendix I.

	Sample Size		HSI		Matched non-HSI		Model estimates	Wilcoxon Test
Variable	HSI	Non-HSI	Mean outcome	Median outcome	Mean outcome	Median outcome	p-value	p-value
Endowment, end of year per full-time equivalent student	451	929	129,750	1,003	163,957	1,369	.10	0

Source: GAO analysis of data from the Department of Education's Integrated Postsecondary Education Data System (2020-21 school year). | GAO-24-106162

Notes: All schools in Puerto Rico were excluded from this analysis due to an inability to find non-HSI matches within Puerto Rico. Variables for which both p-values are less than .05 indicate a statistically significant difference between HSIs and non-HSIs at the .05 level.

[a]Tuition reliance (which includes tuition and fees revenue net discounts, allowances, and institutional aid) represents the ratio between net tuition and all sources of revenue per school.

[b]Government reliance (which includes federal revenue—excluding Pell Grants, which may not be treated as revenue provided directly to the college—and state and local appropriations, grants, and contracts) represents the ratio between government funds and all sources of revenue per school.

Table 7: Selected Institutional, Student, and Financial Data for Hispanic-Serving Institutions (HSI) and Matched Non-HSIs, by Sector, 2020-21 School Year

	Sector	Sample size		HSI		Matched non-HSI		Model estimates	Wilcoxon Test
Variable		HSI	Non-HSI	Mean outcome	Median outcome	Mean outcome	Median outcome	p-value	p-value
Out-of-state average tuition for full-time undergraduates	Public	342	506	10,205	8,528	10,183	8,576	0.60	0.86
	Private	135	641	26,063	27,835	25,130	21,760	0.13	0.10
In-state average tuition for full-time undergraduates	Public	351	520	3,882	2,817	4,726	4,128	0.00	0.00
	Private	135	641	26,063	27,835	25,103	21,652	0.13	0.09
Percent of full-time first-time, undergraduates awarded any financial aid	Public	351	517	82	83	83	87	0.09	0.06
	Private	126	563	98	100	98	100	0.18	0.06
Percent of undergraduate students awarded Pell grants	Public	351	523	32	31	31	31	0.00	0.52
	Private	134	630	46	46	37	35	0.00	0.00
Tuition reliance[a]	Public	353	520	21	18	25	23	0.00	0.00
	Private	132	629	65	65	49	47	0.00	0.00
Government reliance[b]	Public	352	522	75	79	71	73	0.00	0.00
	Private	135	635	73	80	59	63	0.00	0.00
	Public	292	459	660,991	100,403	816,005	296,320	0.00	0.30

	Sector	Sample size		HSI		Matched non-HSI		Model estimates	Wilcoxon Test
Variable		HSI	Non-HSI	Mean outcome	Median outcome	Mean outcome	Median outcome	p-value	p-value
Private grants and contracts	Private	128	571	3,086,946	1,865,534	2,913,319	1,389,151	0.36	0.77
Endowment, end of year	Public	298	467	9,034,311	2,497,898	10,275,867	5,180,412	0.04	0.05
	Private	125	563	37,021,495	12,572,683	27,860,741	3,799,915	0.72	0.16
Endowment, end of year per full-time equivalent student	Public	323	474	1,286	373	1,830	1,089	0.00	0.00
	Private	130	547	1,688,231	778,263	1,875,792	524,979	0.07	0.41

Source: GAO analysis of data from the Department of Education's Integrated Postsecondary Education Data System (2020-21 school year). | GAO-24-106162

Notes: All schools in Puerto Rico were excluded from this analysis due to an inability to find non-HSI matches within Puerto Rico. Variables for which both p-values are less than .05 indicate a statistically significant difference between HSIs and non-HSIs at the .05 level.

[a]Tuition reliance (which includes tuition and fees revenue net discounts, allowances, and institutional aid) represents the ratio between net tuition and all sources of revenue per school.

[b]Government reliance (which includes federal revenue—excluding Pell Grants, which may not be treated as revenue provided directly to the college—and state and local appropriations, grants, and contracts) represents the ratio between government funds and all sources of revenue per school.

Table 8: Selected Institutional, Student, and Financial Data for Hispanic-Serving Institutions (HSI) in Puerto Rico, 2020-21 School Year

Variable	Mean	Median
Out-of-state average tuition for full-time undergraduates	$4,950	$4,920
In-state average tuition for full-time undergraduates	$4,736	$4,656
Percent of full-time, first-time undergraduates awarded any financial aid	95%	97%
Percent of undergraduate students awarded Pell grants	79%	80%
Tuition reliance[a]	79%	84%
Government reliance[b]	85%	89%
Private grants and contracts	$86,172	$0
Endowment, end of year	$328,462	$0
Endowment, end of year per full-time equivalent	$712	$0

Source: GAO analysis of data from the Department of Education's Integrated Postsecondary Education Data System (2020-21 school year). | GAO-24-106162

Note: Table only includes schools that reported values.

[a]Tuition reliance (which includes tuition and fees revenue net discounts, allowances, and institutional aid) represents the ratio between net tuition and all sources of revenue per school.

[b]Government reliance (which includes federal revenue—excluding Pell Grants, which may not be treated as revenue provided directly to the college—and state and local appropriations, grants, and contracts) represents the ratio between government funds and all sources of revenue per school.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, Will Colvin (Assistant Director), Brian Schwartz (Analyst in Charge), Myra Francisco, and Gifty Owusu-Tawiah made key contributions to this report. Michael Armes, Carl Barden, John Bauckman, Charlotte Cable, Gina Hoover, Gabriel Jimenez-Barron, John Mingus, Mimi Nguyen, Samuel Portnow, Raquel Qualls-Hampton, Will Stupski, and Manuel Valverde also contributed to this report.

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