



College Enrollment and Retention in the Era of Covid: Fall 2021 Update on Continued Pandemic Impacts

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Introduction

The covid-19 pandemic disrupted education in the spring of 2020, just as many admissions offices across the country were preparing to extend admissions offers to seniors in the high school graduating class of 2020. The effects of this initial pandemic disruption on fall 2020 college enrollment and retention are documented in the 2021 edition of this report (Howell et al. 2021). In that prior report, we find that, compared to the 2019 cohort, students in the class of 2020 experienced declines in enrollment rates in both the four-year and two-year sectors. We also find that first-year retention rates for students in the class of 2019—who were college freshmen when the pandemic first began—declined for students enrolled in the two-year sector and remained relatively stable for those enrolled in the four-year sector.

Pandemic-related disruptions continued during the 2020-21 academic year for both high school and college students. High school seniors in the class of 2021 may have spent much of their senior year learning remotely or in a hybrid mode, which research now connects with missed learning.¹ These students from the class of 2021 were also the first to apply to college under widespread test-optional admissions policies, announced by nearly all colleges when the pandemic closed and reduced the capacity of testing centers. College freshmen from the high school class of 2020 experienced fairly minimal pandemic disruptions while still in high school, but may have spent their first year of college fully or partially at home, or taking online classes from their dorm rooms, which research shows reduced student connectedness to their coursework and campus.² These disruptions affected the students and institutions in this study at different points in time and in potentially overlapping ways, such that it is easy to misinterpret, conflate, and incorrectly assign causality to changes observed over time. A careful reading of the data in this report requires familiarity with the timing of pandemic-related disruptions to different cohorts of students.³

In this report, we examine the transition to college among students in the class of 2021 and the first-year retention rates among students in the class of 2020. In both cases, we show how the continued effects of the pandemic during the 2020-21 academic year influence college enrollment and retention rates relative to prior cohorts of students who were largely or entirely unaffected by the pandemic. Among students in the four-year sector, we document increases in college enrollment rates among the class of 2021 (compared to the prior cohort of high school seniors) and decreases in college retention rates among the class of 2020 (compared to the prior cohort of college freshmen). Among students in the two-year sector, decreases in both enrollment and retention rates on top of decreases experienced in the first year of the pandemic continue to paint a dire picture. It is important to note that the pandemic created disruptions to learning, mental health, physical health, opportunities to test, grading, and college policies and practices. We provide a comprehensive view of how the pandemic continues to affect students, institutions, and states, by including considerable detail on enrollment and retention rate changes for subgroups defined by student demographics, academic preparation, high school attributes, college characteristics, and geography.

¹ For evidence of missed learning across a variety of grade levels, see Goldhaber et al. (2022), Donnelly and Patrinos (2021), and the Center on Reinventing Public Education (2021).

² For evidence on college student experiences during the pandemic, see Kofoed et al. (2021), Morris et al. (2021), and Willen (2021).

³ See Appendix Table 1 for more detail on all cohorts of students utilized in this report and the timing of when the covid-19 pandemic did and did not disrupt their learning, testing, transition to college, and freshmen experience.

This study draws on data from College Board and the National Student Clearinghouse (NSC) with a sample of over 10 million PSAT takers who represent approximately two-thirds of all U.S. high school graduates in the most recent four cohorts.⁴ The students in our sample attend more than 22,000 U.S. high schools and 2,800 U.S. colleges, resulting in a broadly representative dataset for understanding the continued impact of the pandemic on college enrollment and retention rates among recent high school graduates.

The descriptive statistics in Section 1 of the report provide raw, unadjusted enrollment rates and retention rates in recent years.⁵ Figure 1, which focuses on enrollment rates, shows that between the two pre-pandemic cohorts of 2018 and 2019, four-year college enrollment rates declined slightly while two-year college enrollment rates increased slightly. Research suggests that these pre-pandemic enrollment patterns are related to changes in student demographics and college-going (Bransenberger et al. 2020; Grawe 2021). Between the 2019 and 2020 cohorts, both four-year and two-year enrollment rates declined following the beginning of the pandemic (Howell et al. 2021). Between the 2020 and 2021 cohorts, enrollment rates in the four-year sector partially rebounded and enrollment rates in the two-year sector continued to decline. Figure 2 provides a similar view of raw, unadjusted retention rates and persistence rates over time, and shows that, in the fall of 2021, college retention rates among the 2020 cohort are lower in all sectors relative to the 2019 cohort. Retention and persistence rates in pre-pandemic cohorts were virtually flat.

With the backdrop of the unadjusted enrollment and retention rates in Section 1, the majority of this report relies on fitting statistical models that control for student demographics, high school characteristics, and geography to better isolate the impact of the pandemic on fall 2021 enrollment and retention rates. These regression-adjusted pandemic effects on enrollment and retention are presented in Sections 2 and 3, respectively, through many student, high school, college, and geographic lenses. Five major themes emerge from the regression-adjusted results.

1. **Compared to the 2020 cohort, students in the 2021 cohort were more likely to enroll in a four-year college and less likely to enroll in a two-year college. This pattern is also observed among students who are historically underrepresented in higher education.** The largest shifts in student enrollment rates occurred within the two-year sector, where regression-adjusted enrollment rates declined by over 9% due to the ongoing effects of the pandemic, and stand in stark contrast to the 4.0% enrollment rate increase in the four-year sector overall and 3.0% and 6.8% enrollment rate increases in the public and private nonprofit four-year sectors, respectively (Figure 3A). Compared to the pre-pandemic 2019 cohort, students in the 2021 cohort were about 2% less likely to enroll in a four-year college and 16% less likely to enroll in a two-year college (Figure 3C).⁶ Subgroup analyses of students in the 2021 cohort show that historically underrepresented students experienced larger increases in four-year enrollment rates than other groups (Figures 4 and 8A), but

⁴ The dataset utilized in the 2021 report included both PSAT and SAT takers. In this report, we avoid sample selection challenges by limiting the dataset to PSAT takers because PSAT testing was almost entirely unaffected by the pandemic for students in the class of 2021, who took the PSAT in 2018-19 as sophomores or in 2019-20 as juniors. See Appendix Tables 2 and 3 for more detail on the sample of PSAT takers.

⁵ The descriptive analyses in Section 1 are similar to the approach taken by the National Student Clearinghouse Research Center (2021) and Nagaoka et al. (2021).

⁶ These regression-adjusted enrollment rate changes may differ from other published statistics because they do not attribute pre-pandemic trends and student demographic shifts to pandemic effects.

the share of underrepresented students at four-year colleges in the U.S. in the fall of 2021 is unchanged from prior years (Appendix Figures A1 and A2).

2. **Enrollment rate changes among students in the class of 2021 suggest students are enrolling in more selective colleges than did previous cohorts, and this is particularly true among students with more modest academic credentials who may be shifting from the two-year to the four-year sector.** Students with weaker academic credentials (i.e., high school GPAs of B- and lower) experienced the largest enrollment rate increases in the four-year sector while students with the strongest academic credentials (i.e., high school GPAs of A+) experienced little change in their four-year enrollment rates (Figure 10). Compared to their 2020 cohort counterparts, A and A+ students in the 2021 cohort were more likely to enroll in selective four-year colleges and less likely to enroll in less selective colleges, suggesting shifts in where students enroll. Among students with GPAs of B+ or lower, there was no decline in four-year enrollment rates at less selective colleges, suggesting that some students may be shifting from two-year colleges to four-year colleges (Figure 18).
3. **Compared to students in the 2019 cohort, the first-year retention rates of students in the 2020 cohort declined at nearly all types of colleges and for nearly all types of students. The declines in retention rates at four-year colleges were larger for students from historically underrepresented groups.** Academic momentum between the first and second year of college is an indicator of eventual degree completion, so retention is an important early measure of potential longer run consequences of the pandemic. Compared to the 2019 cohort, first-year retention rates of the class of 2020 students declined by 4.5% for those enrolled at public two-year colleges, by 3.5% at public four-year colleges, and by 0.9% at private nonprofit four-year colleges (Figure 21A).⁷ Subgroup analyses show that historically underrepresented students in the 2020 cohort experienced larger declines in first-year retention rates than other groups in the four-year sector (Figures 22 and 26A) while Black and White students experienced the largest declines in retention rates in the two-year sector (Figure 22).⁸ Retention rate changes documented in this report are unrelated to colleges' test-optional policies, which were announced in 2020 but first relevant for students applying for fall 2021 college entry.
4. **Retention rates increased only among students at higher tuition and very selective private four-year institutions. At selective colleges, only the students with high HSGPAs experienced increases in retention.** Compared to the 2019 cohort, students in the 2020 cohort—who were college freshmen in the 2020-21 academic year—experienced declines in their first-year retention rates at all colleges except for students at the most selective private four-year colleges and at colleges with published tuition and fees above \$45,000 (Figure 34). Declines in retention rates were largest among students attending the least selective colleges (Figure 35). Within each college selectivity group, declines in retention rates were larger for students with lower HSGPAs (Figure 36).

⁷ Gardner (2022) shows that student age and enrollment intensity are also related to retention rates among students who entered college in the fall of 2020. Retention rate declines are concentrated among younger students as well as those enrolled full-time.

⁸ Fall 2021 retention rate declines, particularly among historically underrepresented students, were alluded to in survey evidence that identified pandemic-related factors as problematic for college student engagement and success (Gallup-Lumina 2022, Morris 2021).

- 5. National patterns mask state and regional variation in both enrollment rate and retention rate changes.** In most states, students in the 2021 cohort were more likely to enroll in a four-year college and less likely to enroll in a two-year college than their 2020 counterparts. Students from Western and Southwestern states saw larger increases in four-year enrollment rates than students from other states. In five states, students saw increases in two-year enrollment rates (Figure 12). Results from retention analyses by college region show that, across all college regions, retention rates of students in the 2020 cohort declined compared to the 2019 cohort. Retention rates declined the most for students enrolled in four-year colleges in the Southwest and two-year colleges in the Middle States (Figure 32).

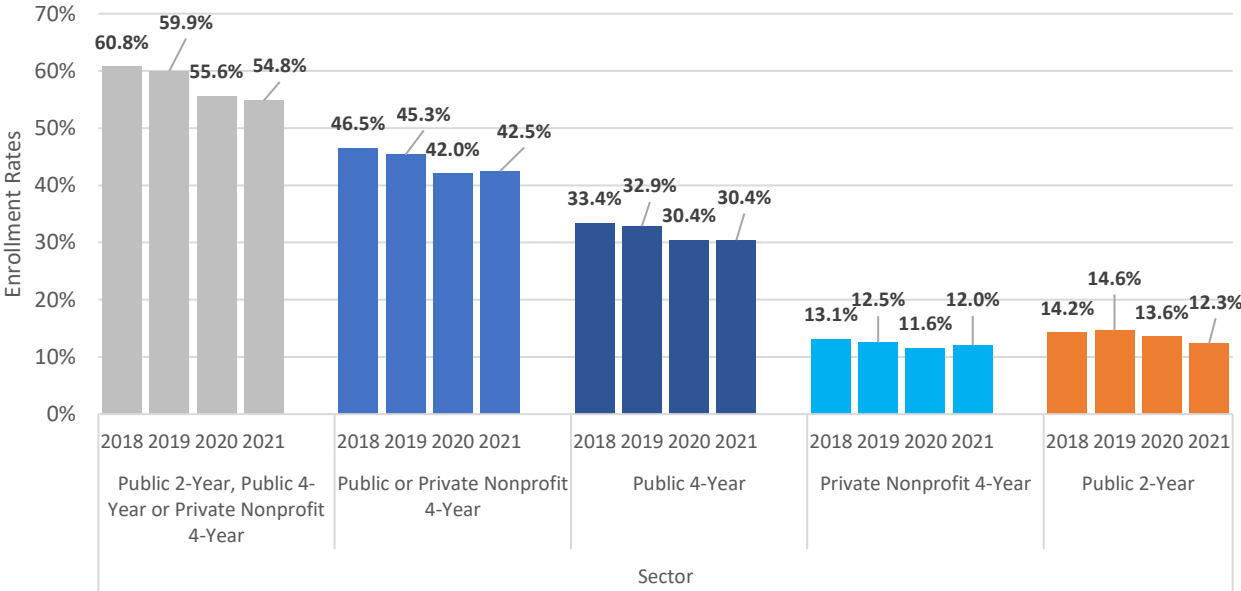
In the data that follow, we paint a picture of the pandemic's ongoing impacts on college enrollment and retention rates among recent high school graduates. Research shows that delayed college enrollment or failure to persist after the first year negatively impacts college completion and diminishes lifetime earnings (Witteveen and Attewell 2021), thus the results have both short-run relevance and long-run implications. We acknowledge that the student and college decisions represented by the fall 2021 data included in this report are still evolving. Continued research will be critical to assess whether the results will stabilize for subsequent cohorts of recent high school graduates. The pandemic's long-term consequences for eventual college completion rates, innovations in instructional models, and changes in the higher education landscape remain open questions expected to be the focus of much future education research.

Section 1: Unadjusted Changes in Enrollment, Retention and Persistence Rates

College Enrollment Rates by Sector

Immediate four-year college enrollment rates increased slightly from 42.0% for the 2020 high school graduating cohort to 42.5% for the 2021 cohort. Two-year college enrollment rates declined from 13.6% for the 2020 cohort to 12.3% for the 2021 cohort (1.3 percentage points, representing a 9.6% decline).

Figure 1: Immediate College Enrollment Rates Among Students in the 2018 to 2021 High School Graduating Cohorts, by Sector and Cohort



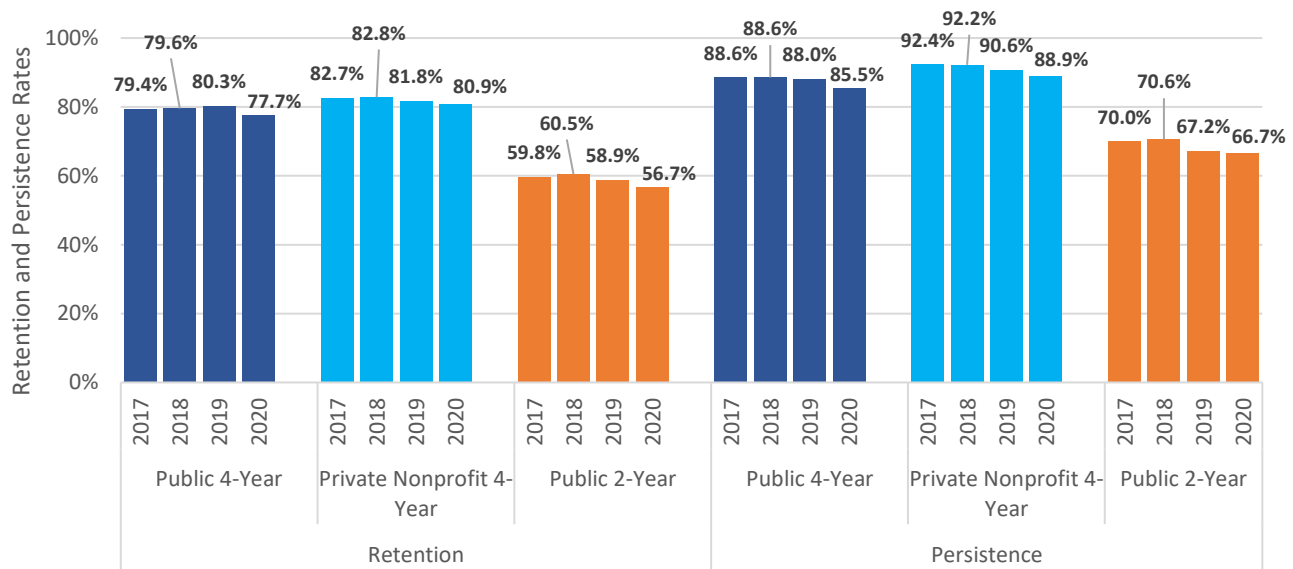
Note: Based on students who took the PSAT. Enrollment in the for-profit and less than two-year colleges is not included because less than 0.5% of students in the 2018 through 2021 high school cohorts in the College Board data enrolled in these institutions. Components may not sum to totals because of rounding.

- Between the 2020 and 2021 cohorts, four-year college enrollment rates remained unchanged in the public four-year sector and increased from 11.6% to 12.0% in the private nonprofit four-year sector (0.4 percentage points, representing a 3.4% increase).
- Between the 2018 and 2019 cohorts (pre-pandemic), four-year college enrollment rates declined from 33.4% to 32.9% (0.5 percentage points, representing a 1.5% decline) in the public four-year sector and from 13.1% to 12.5% in the private nonprofit four-year sector (0.6 percentage points, representing a 4.6% decline). Two-year college enrollment rates increased from 14.2% to 14.6% between these two pre-pandemic cohorts.
- The share of high school graduates enrolled in any public two-year, public four-year, or private nonprofit four-year college immediately after high school was 60.8% in 2018, 59.9% in 2019, 55.6% in 2020, and 54.8% in 2021.

College Retention and Persistence Rates by Sector

Between the 2019 and 2020 cohorts, the first-year retention rate declined from 80.3% to 77.7% (2.6 percentage points) in the public four-year sector, from 81.8% to 80.9% (0.9 percentage points) in the private nonprofit four-year sector, and from 58.9% to 56.7% (2.2 percentage points) in the public two-year sector.

Figure 2: First-Year Retention and Persistence Rates Among College Students in the 2017 to 2020 Entering Cohorts, by Sector and Cohort



Note: Based on students who took the PSAT. First-year retention rates measure the share of students enrolling in the same college one year after initial enrollment. First-year persistence rates measure the share of students enrolling in any college one year after initial enrollment.

- Between the 2019 and 2020 cohorts, the first-year persistence rate declined by 2.6 percentage points in the public four-year sector, by 1.7 percentage points in the private nonprofit four-year sector, and by 0.5 percentage points in the public two-year sector.⁹
- Between the 2017 and 2018 cohorts (pre-pandemic), the first-year retention and persistence rate remained stable in all sectors.

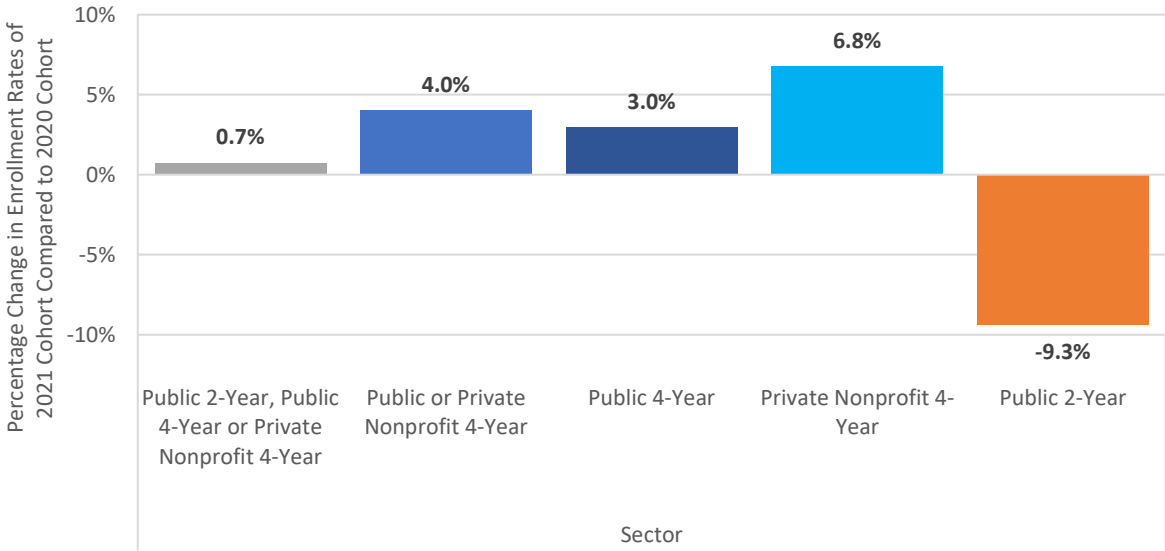
⁹ Smaller persistence rate declines in the public two-year sector may be related to the number of older students and part-time students served in this sector, which research shows experienced increases in first-year persistence in fall 2021 (Gardner 2022).

Section 2: Regression-Adjusted Percentage Changes in Enrollment Rates

Enrollment Rate Changes by Sector

Controlling for student demographics and academic preparation as well as high school characteristics, the likelihood of enrolling in a four-year college among students in the 2021 cohort is 4.0% higher than that of students in the 2020 cohort. The likelihood of enrolling in a two-year college among students in the 2021 cohort is 9.3% lower than that of students in the 2020 cohort.

Figure 3A: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Sector



Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. Enrollment in the for-profit and less than two-year colleges is not included in this figure because less than 0.5% of students in the 2018 through 2021 high school cohorts in the College Board data enrolled in these schools.

- Controlling for student demographics and academic preparation as well as high school characteristics, the 2021 cohort students were more likely to enroll in a four-year college than the 2020 cohort while the 2020 cohort students were less likely to enroll in a four-year college than the 2019 cohort (Figure 3B). The likelihood of enrolling in a two-year college declined for both the 2020 and 2021 cohorts (Figures 3B and 3C).
- There were an estimated 3.75 million high school graduates in the 2021 cohort in the United States (Bransenberger et al. 2021). The 0.7% increase in overall college enrollment rates translates into 26,000 more recent high school graduates enrolling in college in the fall immediately after high school graduation.

Figure 3B: Percentage Change in Regression-Adjusted Enrollment Rates of the 2020 and 2021 Cohorts Compared to the Previous Cohorts, by Sector

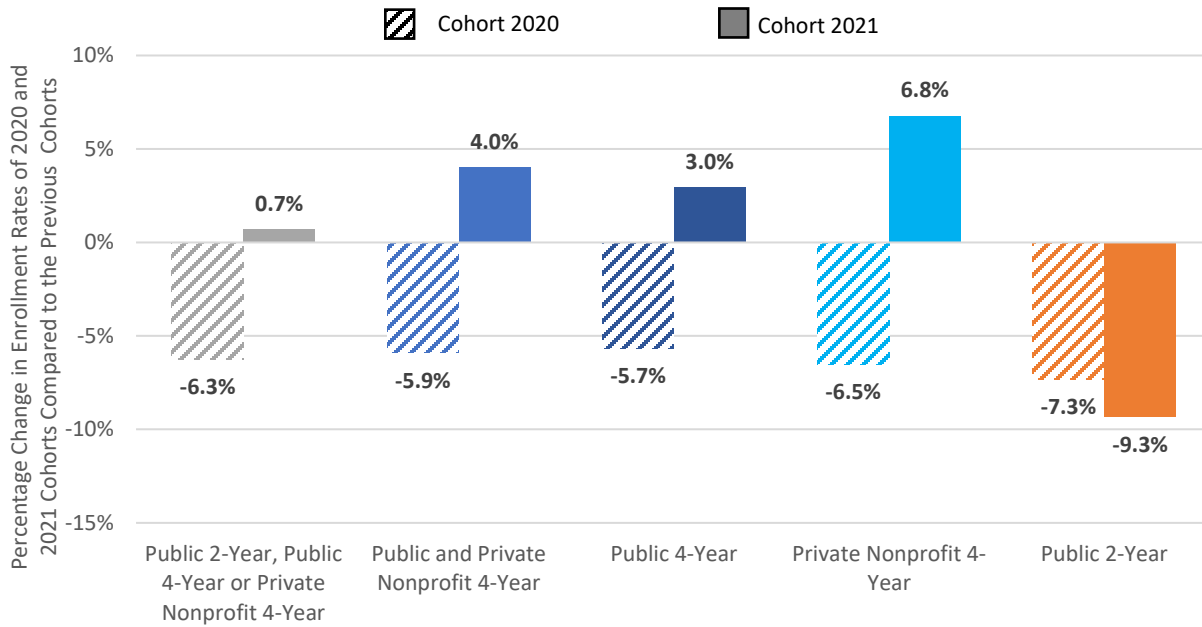
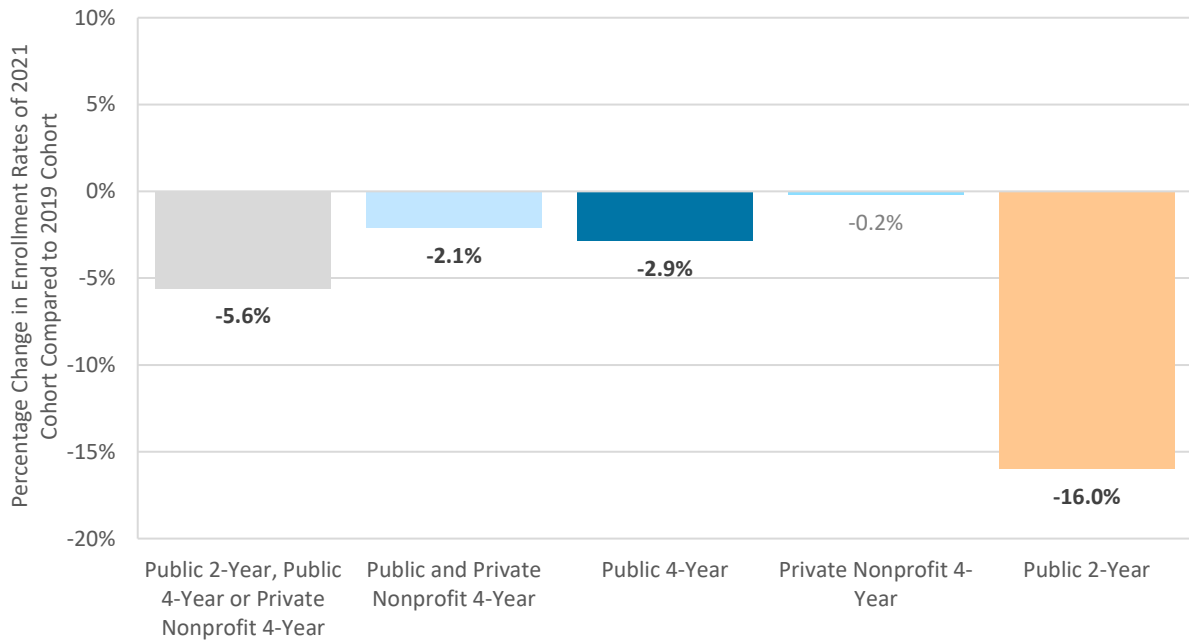


Figure 3C: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2019 Cohort, by Sector

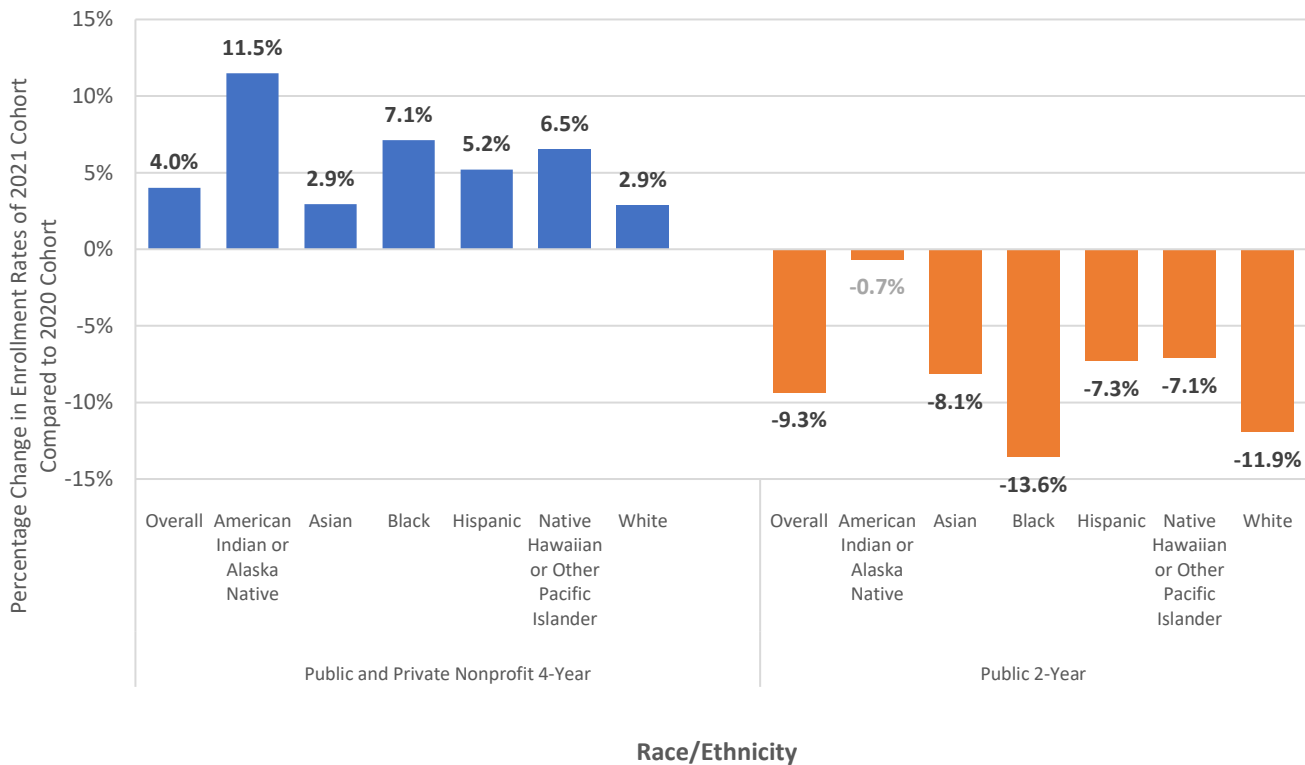


Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. Enrollment in the for-profit and less than two-year colleges is not included in this figure because less than 0.5% of students in the 2018 through 2021 high school cohorts in the College Board data enrolled in these schools.

Enrollment Rate Changes by Sector and Race/Ethnicity

Across all racial/ethnic groups, students in the 2021 cohort were more likely to enroll in a four-year and less likely to enroll in a two-year college than their 2020 counterparts. The increases in four-year college enrollment rates were larger among underrepresented minority (URM) students than among White and Asian students. The declines in two-year college enrollment rates were larger among Black and White students than among other groups of students.

Figure 4: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Race/Ethnicity



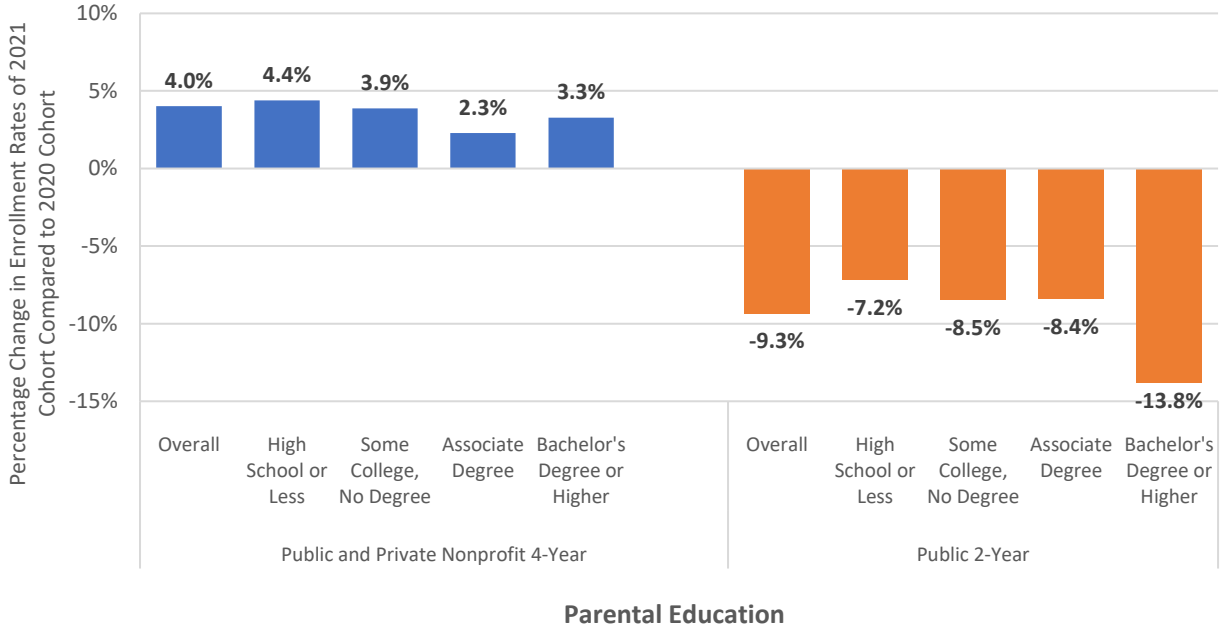
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level.

- Despite slightly larger percentage increases in four-year enrollment rates among underrepresented minority students, the share of Black, Hispanic, and Native students is unchanged at four-year institutions in the U.S. between 2020 and 2021 except for small increases at low admission rate colleges (Appendix Figure A1), a result consistent with prior evidence from the Admissions Research Consortium (College Board 2022).

Enrollment Rate Changes by Sector and Parental Education

Compared to the 2020 cohort, students in the 2021 cohort whose parents hold at least a bachelor’s degree saw the largest declines in two-year college enrollment rates (13.8%). Four-year college enrollment rates increased across all parental education levels.

Figure 5: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Parental Education



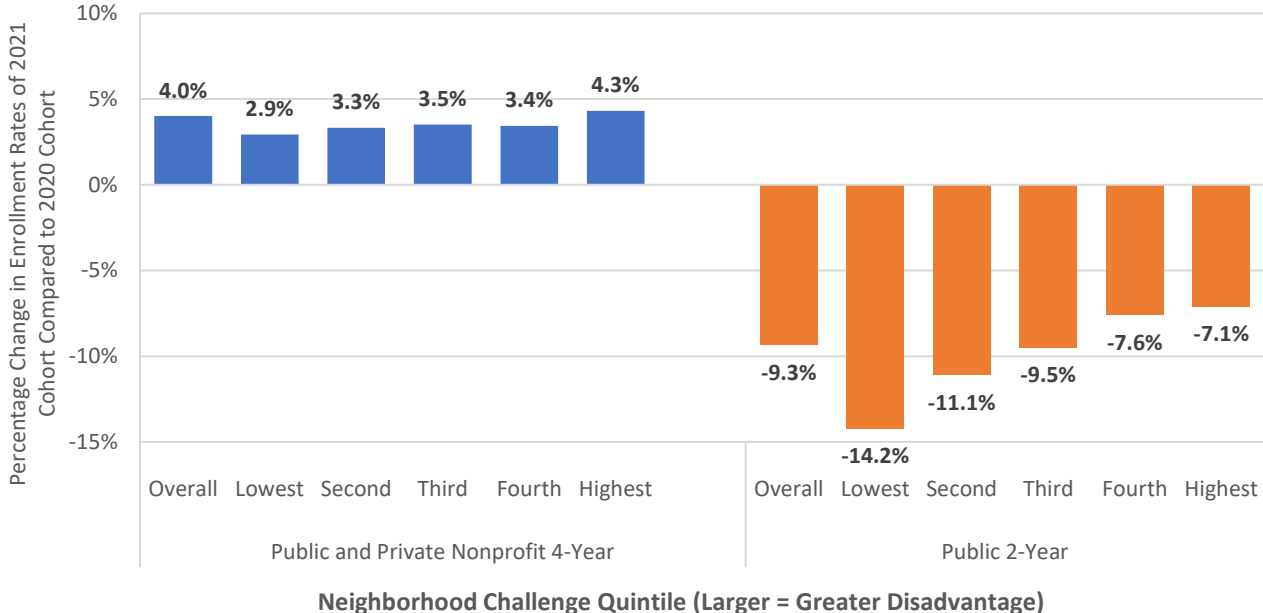
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level.

- Two-year college enrollment rates declined by 13.8% among students with at least one parent holding a bachelor’s degree and by between 7.2% and 8.5% among students whose parents do not hold a bachelor’s degree.
- By contrast, four-year college enrollment rates increased across all parental education levels, with little variation across the levels of parental education. Four-year college enrollment rates increased by 4.4% among students whose parents have a high school degree or less and by 2.3% among students whose parents hold an associate degree (online Appendix Table 4).

Enrollment Rate Changes by Sector and Neighborhood Attributes

Disaggregating results by neighborhood attributes similarly reveals that the increases in four-year college enrollment rates of the 2021 cohort are slightly higher among students who reside in higher-challenge neighborhoods, while the declines in two-year college enrollment rates are higher among students who reside in lower-challenge neighborhoods.

Figure 6: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Neighborhood Attributes



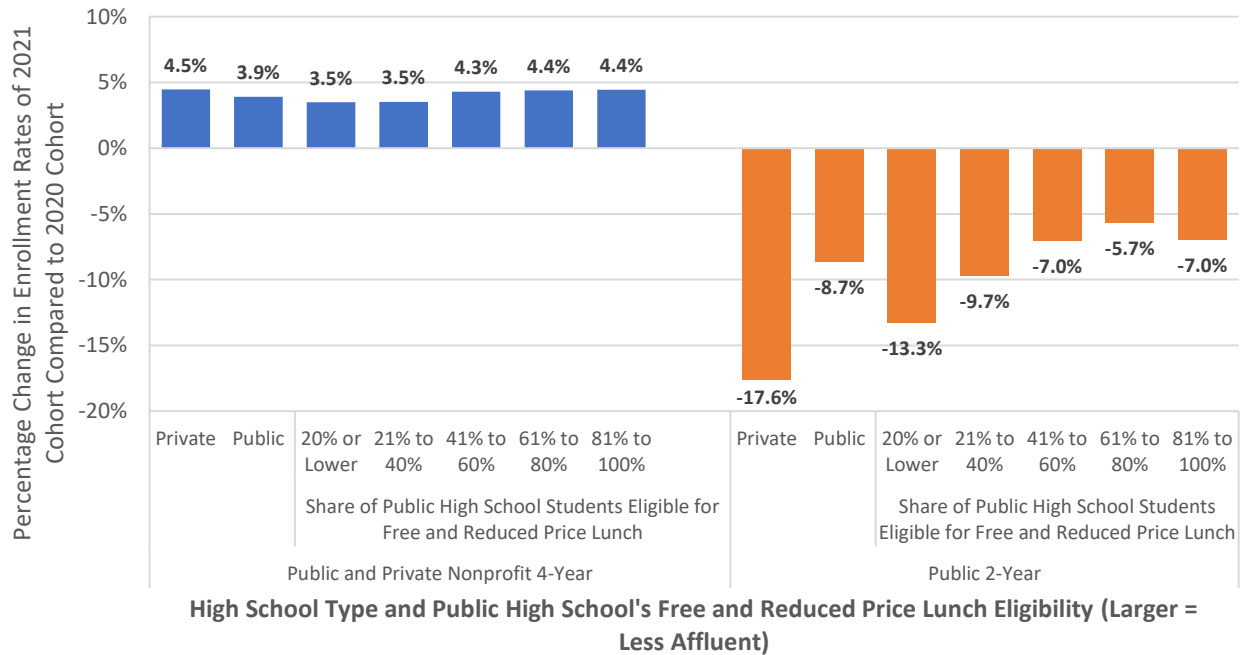
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. The neighborhood challenge measure is comprised of six indicators at the census tract level including college attendance, household structure, median family income, housing stability, education level, and crime. For more information about these measures, see: <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

- Two-year college enrollment rates declined by 14.2% among students in lowest challenge neighborhoods and by 7.1% among students in the highest challenge neighborhoods.
- By contrast, four-year college enrollment rates increased the most (4.3%) among students in the highest challenge neighborhoods. These students saw an increase of 11.1% in their private nonprofit four-year college enrollment rates and an increase of 2.6% in their public four-year college enrollment rates (online Appendix Table 4).
- Despite slightly larger percentage increases in four-year enrollment rates among students from the highest neighborhood challenge quintile, the share of high neighborhood challenge students decreased at four-year institutions in the U.S. between 2020 and 2021 except for small increases at low admission rate colleges (Appendix Figure A2), a result consistent with prior evidence from the Admissions Research Consortium (College Board 2022).

Enrollment Rate Changes by Sector and High School Free and Reduced Price Lunch (FRPL) Eligibility

Increases in four-year college enrollment rates of the 2021 cohort were slightly larger among students from less affluent public high schools, while declines in two-year college enrollment rates were larger among students from more affluent public high schools.

Figure 7: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by High School Free and Reduced Price Lunch Eligibility



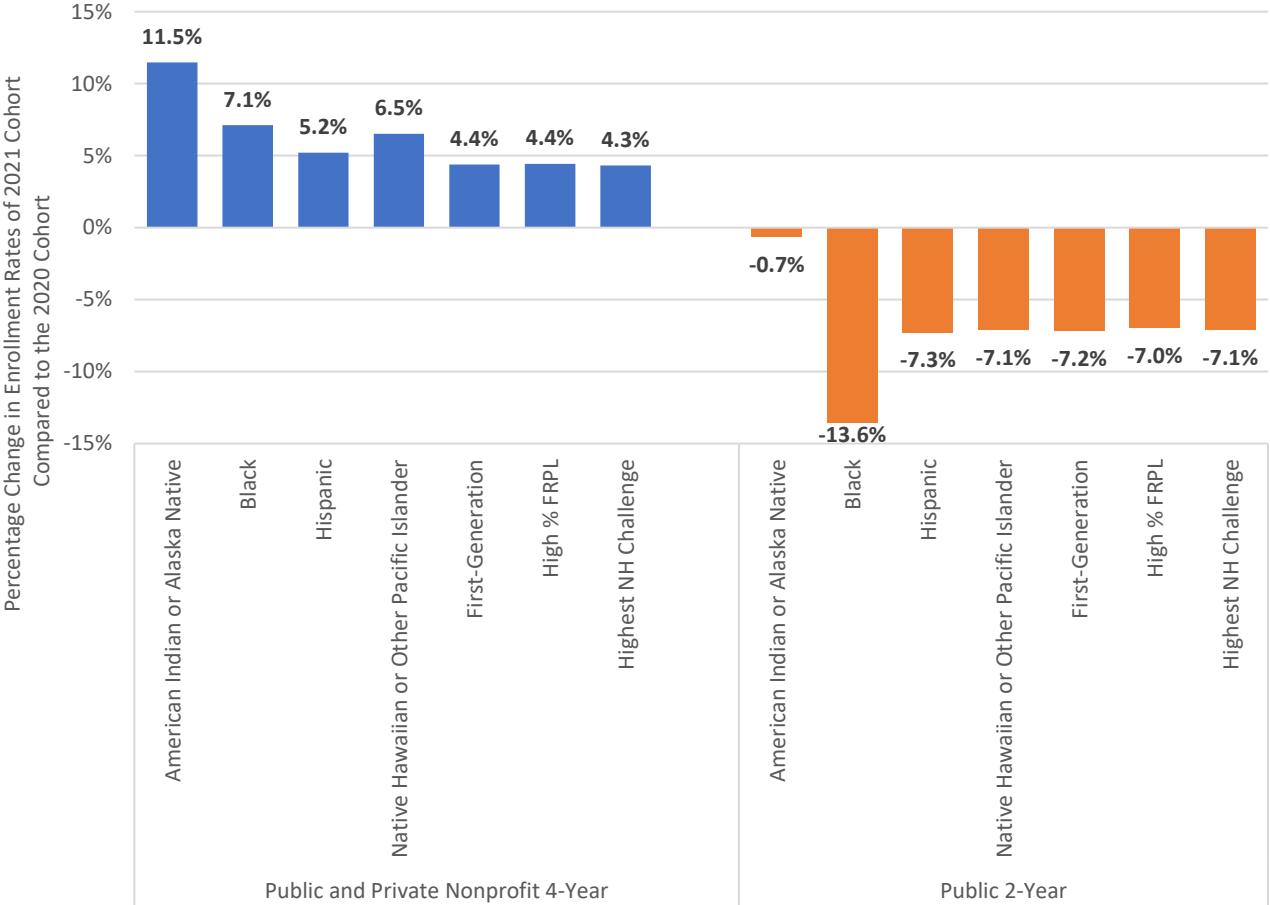
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. High school FRPL eligibility is from the National Center for Education Statistics's Common Core of Data.

- Two-year college enrollment rates declined by 8.7% among students from public high schools and by 17.6% among students from private high schools. Two-year enrollment rates declined by 13.3% among students from the most affluent public high schools and by 7.0% among students from the least affluent public high schools.
- By contrast, four-year college enrollment rates increased the most (4.4%) among students from the less affluent public high schools where more than 60% of students are eligible for FRPL.

Enrollment Rate Changes Among Traditionally Underrepresented Students by Sector

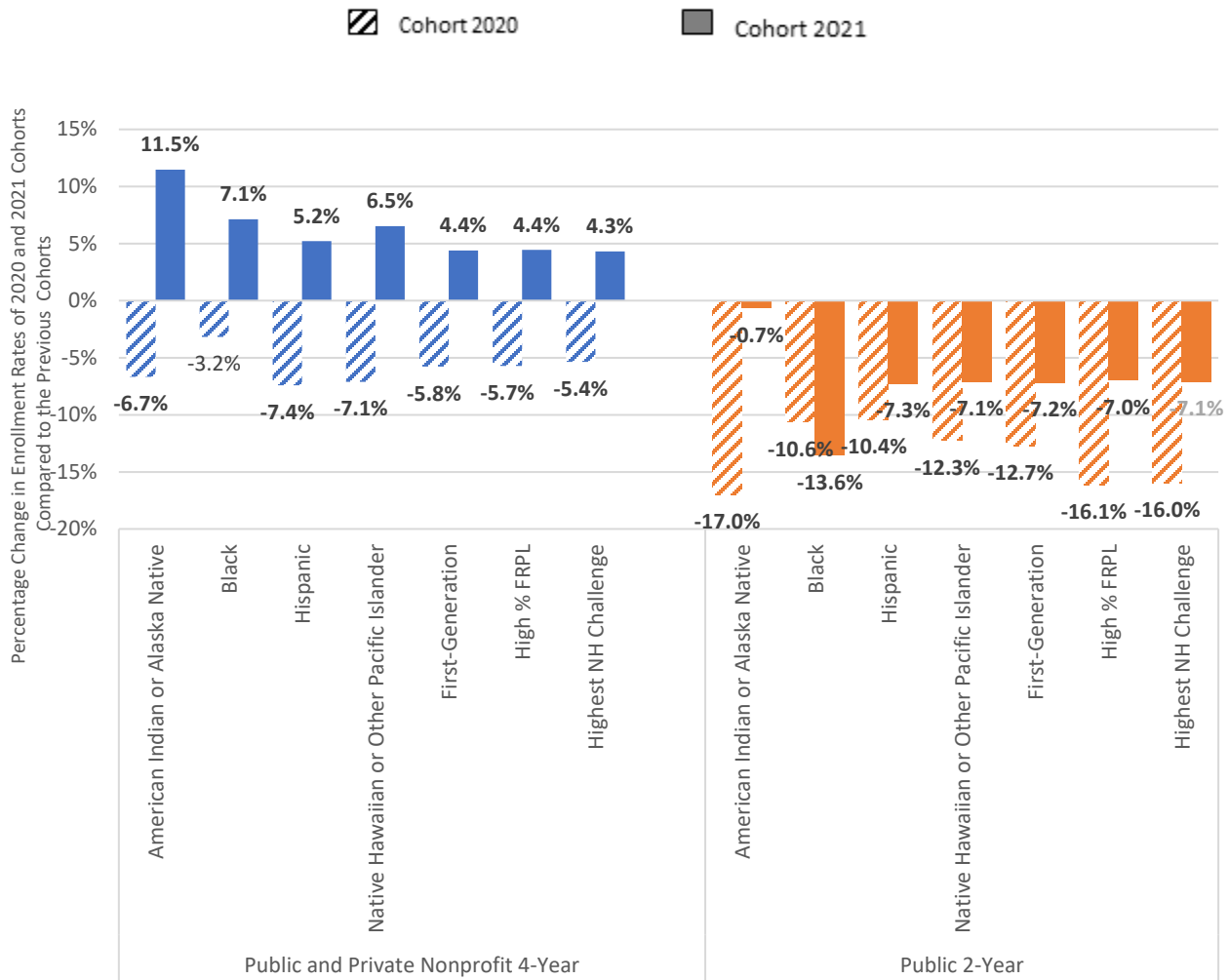
Among groups of traditionally underrepresented students, the 2021 cohort students were more likely to enroll in a four-year college and less likely to enroll in a two-year college than their 2020 counterparts, controlling for student demographics and academic preparation as well as high school characteristics.

Figure 8A: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort Among Traditionally Underrepresented Students, by Sector



- Combining data from Figures 4 – 7 summarizes changes in college enrollment rates among student subgroups who are historically underrepresented in higher education.

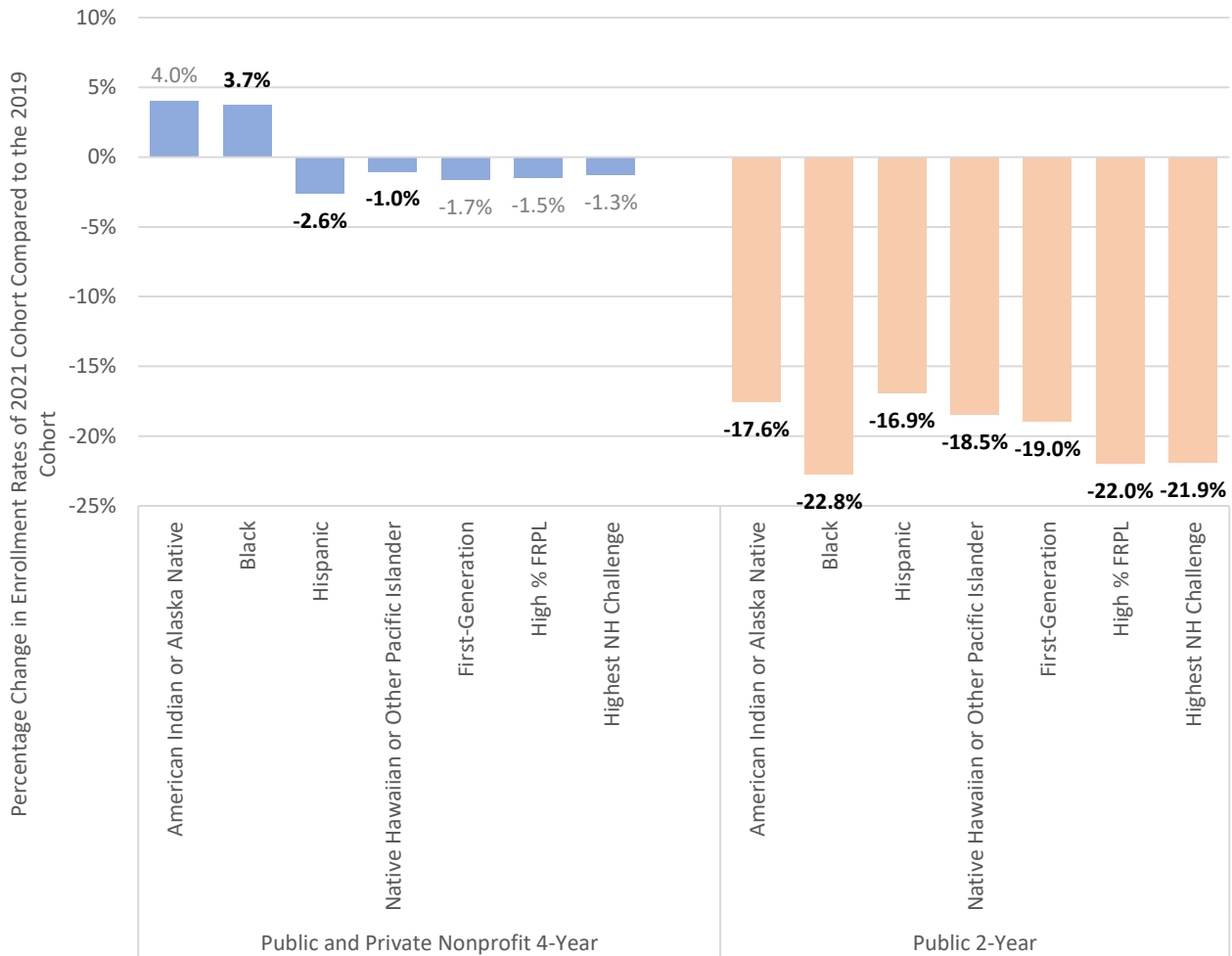
Figure 8B: Percentage Change in Regression-Adjusted Enrollment Rates of the 2020 and 2021 Cohorts Compared to the Previous Cohorts Among Traditionally Underrepresented Students, by Sector



Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level.

- Class of 2020 students from historically underrepresented subgroups uniformly experienced decreases in enrollment rates in both the four- and two-year sectors, while four-year enrollment rates rebounded for these student subgroups in the class of 2021 (Figure 8B).

Figure 8C: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2019 Cohort Among Traditionally Underrepresented Students, by Sector

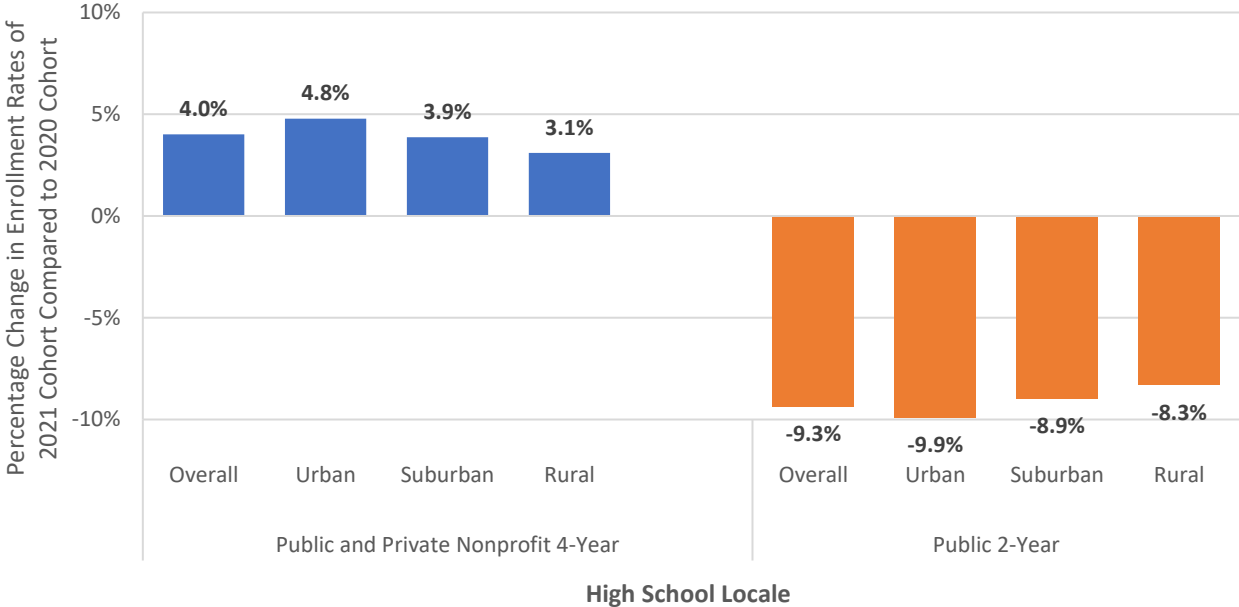


- The four-year enrollment rates of first generation students and those from less affluent schools and higher challenge communities have nearly fully rebounded to pre-pandemic levels, while two-year enrollment rates have continued to fall relative to pre-pandemic cohorts (Figure 8C).

Enrollment Rate Changes by Sector and High School Locale

The increases in four-year college enrollment rates of the 2021 cohort were slightly larger for students from urban high schools than for students from rural and suburban high schools. Declines in two-year college enrollment rates were slightly larger for urban high school students than for suburban and rural high school students.

Figure 9: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by High School Locale



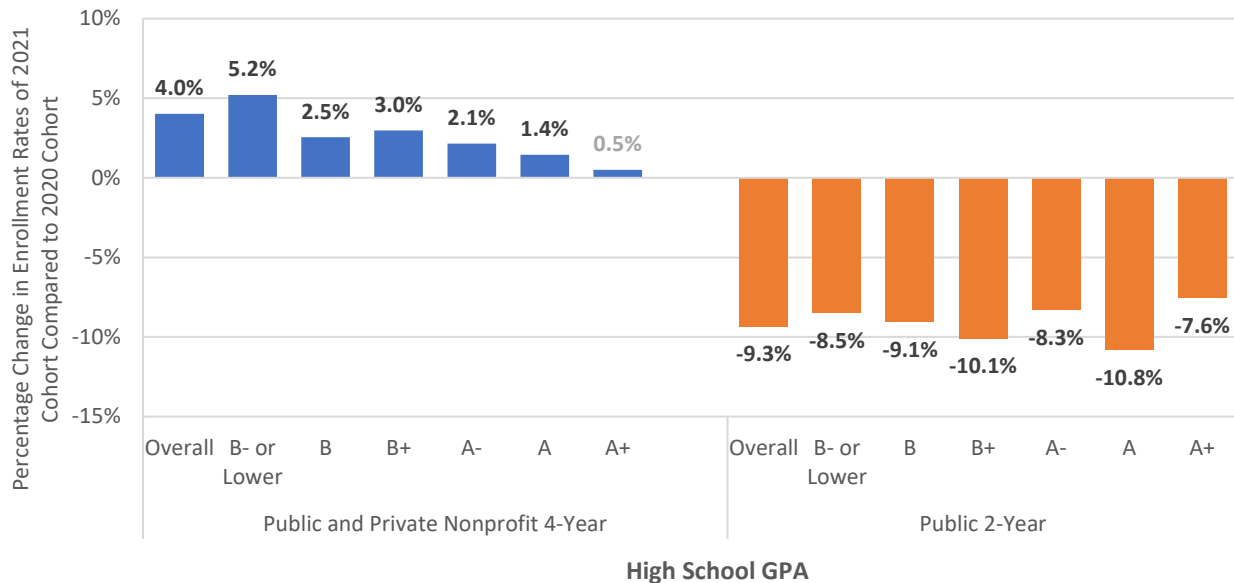
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. High School Locale is from the National Center for Education Statistics’s Common Core of Data.

- Two-year college enrollment rates declined by 9.9% among students from urban high schools, by 8.9% among students from suburban high schools, and by 8.3% among students from rural high schools.
- Four-year college enrollment rates increased by 4.8% among students from urban high schools, by 3.9% among students from suburban high schools, and by 3.1% among students from rural high schools.
- Similar to the pattern seen in overall four-year college enrollment rates, increases in both public four-year and private nonprofit four-year enrollment rates were largest among students from urban high schools (online Appendix Table 4).

Enrollment Rate Changes by Sector and High School GPA

Increases in four-year college enrollment rates of the 2021 cohort were higher among students with lower high school grades than among students with higher grades. There was no clear pattern between declines in two-year college enrollment rates and high school grades.

Figure 10: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by High School GPA



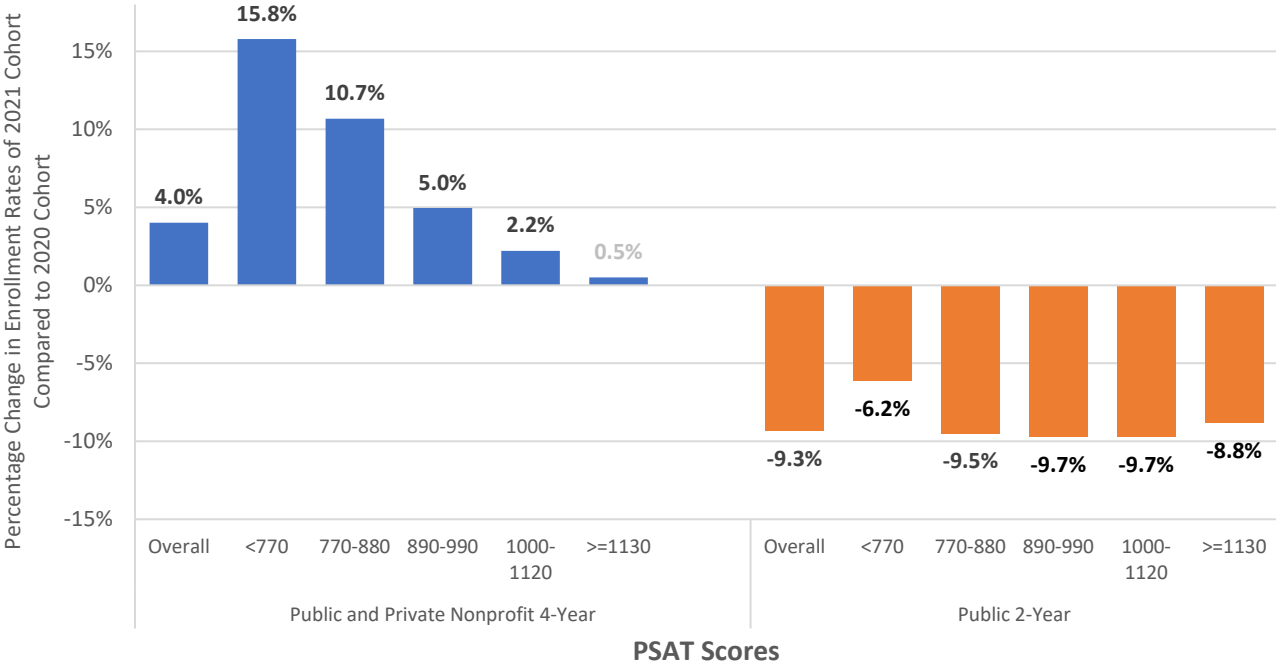
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. High school GPA is self-reported.

- Four-year college enrollment rates increased by about 5% among students with GPAs of B- or lower and remained unchanged among students with GPAs of A+.
- Public four-year college enrollment rates increased by 4.9% among students with GPAs of B- or lower and declined for students with GPAs of A+. Private nonprofit four-year college enrollment rates increased across all GPA groups, including a 6.4% increase among students with GPAs of B- or lower (online Appendix Table 4).

Enrollment Rate Changes by Sector and PSAT Scores

Increases in four-year college enrollment rates of the 2021 cohort were higher among students with lower PSAT scores than among students with higher scores. Declines in two-year enrollment rates were smallest among students with PSAT scores lower than 770.

Figure 11: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by PSAT Scores



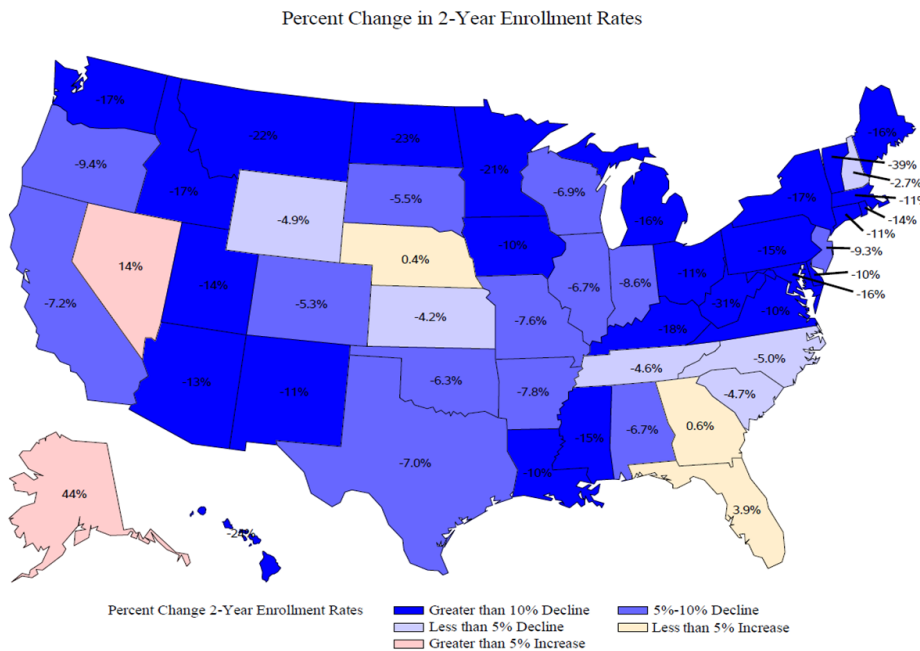
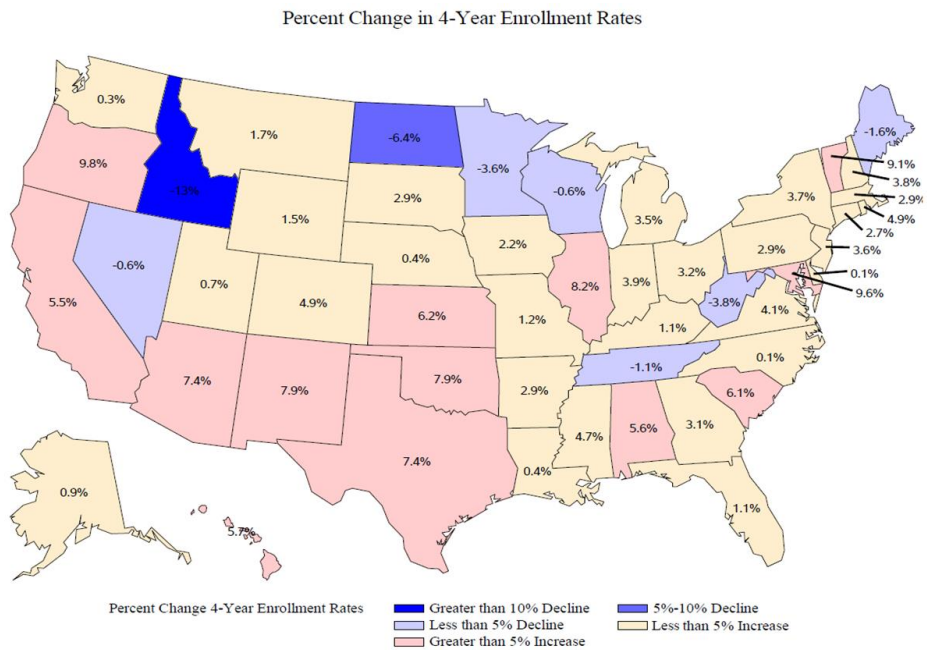
Note: Data labels in gray are not statistically significant at the 5% level.

- Four-year college enrollment rates increased by 15.8% among students with PSAT scores below 770 and remained unchanged among students with PSAT scores of 1130 or higher, patterns consistent with other measures of academic achievement in high school (Figure 10).
- Public four-year college enrollment rates increased by 15.7% among students with PSAT scores of 760 or lower and declined among students with PSAT scores of 1130 or higher. Private nonprofit four-year college enrollment rates increased across all PSAT score groups, including by 16.2% among students with PSAT lower than 770 (online Appendix Table 4).

Enrollment Rate Changes by Sector and Student State of Residence

Compared to the 2020 cohort, four-year college enrollment rates of the 2021 cohort increased among students from most states, while two-year college enrollment rates declined among students from most states.

Figure 12: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Student State of Residence

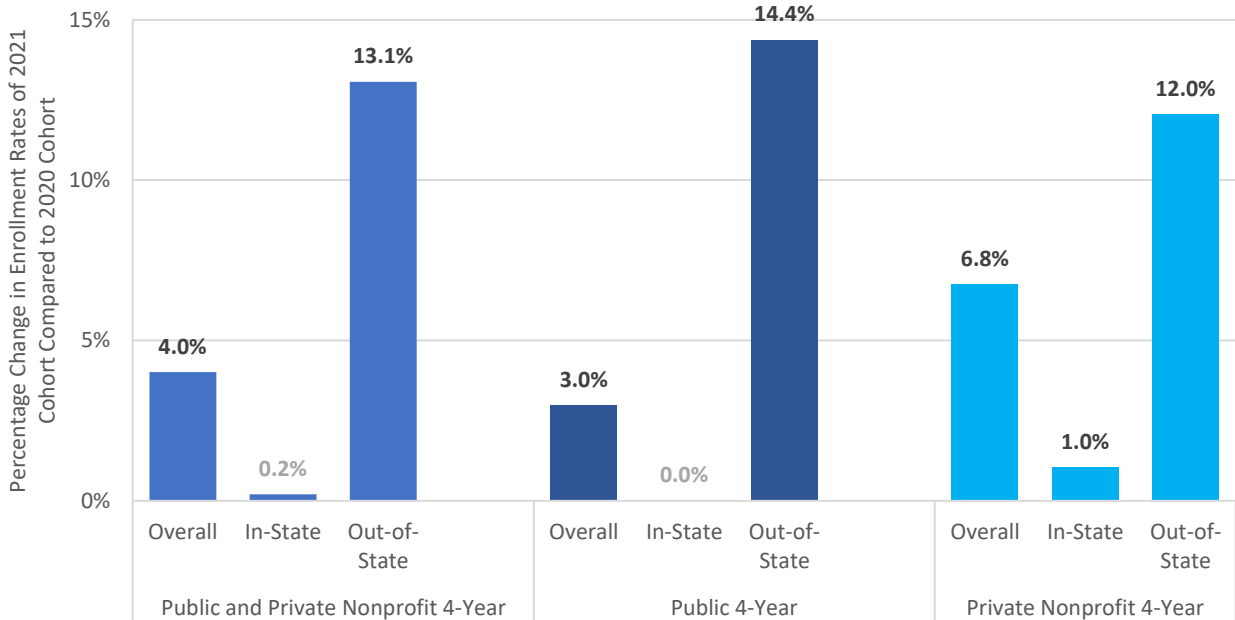


- Compared to the 2020 cohort, four-year college enrollment rates of the 2021 cohort declined among students in eight states. Students from Western and Southwestern states saw larger increases in four-year enrollment rates than students from other states.
- Compared to the 2020 cohort, two-year college enrollment rates of the 2021 cohort declined by more than 10% among students in 27 states and increased among students in five states.
- Compared to the 2019 cohort, four-year college enrollment rates of the 2021 cohort increased in 15 states and the District of Columbia while two-year enrollment rates of the 2021 cohort declined in all but four states.

Enrollment Rate Changes by Sector and In-State Status

Compared to the 2020 cohort, out-of-state enrollment rates of the 2021 cohort at both public four-year and private nonprofit four-year colleges increased by more than 10%. In-state enrollment rates at public four-year colleges remained unchanged and in-state enrollment rates at private nonprofit four-year colleges increased by 1%.

Figure 13: Percentage Change in Regression-Adjusted Four-Year College Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by In-State Status



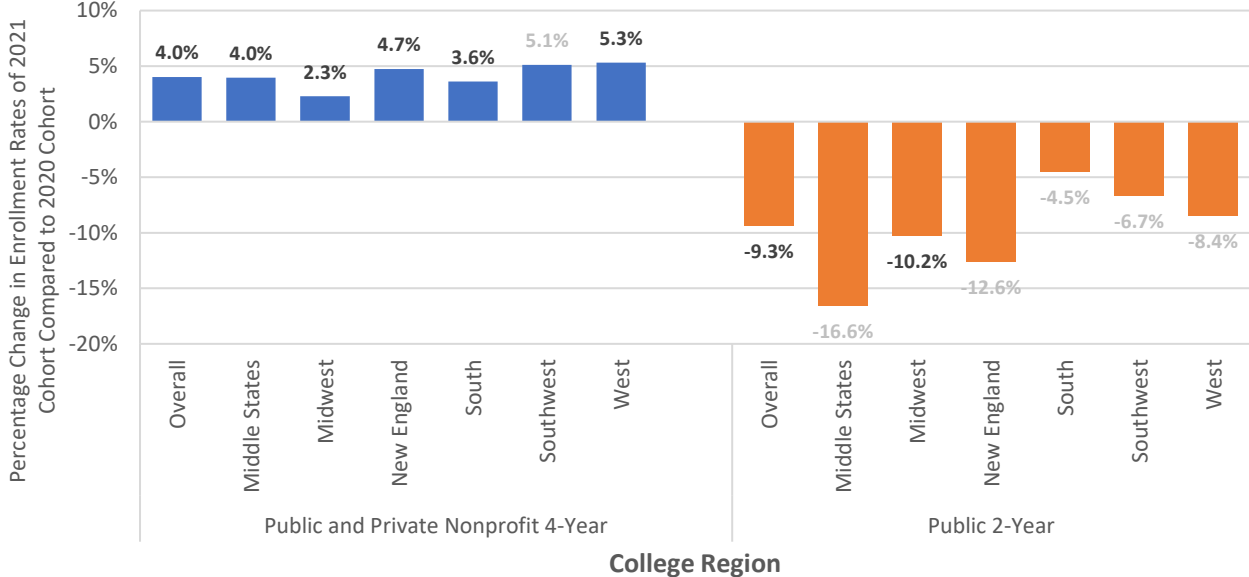
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level.

- After initially expressing and demonstrating a preference for colleges closer to home early in the pandemic (Kim 2020, Howell et al. 2021), increases in the out-of-state four-year enrollment rates between the 2020 and the 2021 cohorts are 12.0% in the private nonprofit four-year sector and 14.4% in the public four-year sector.

Enrollment Rate Changes by Sector and College Region

Increases in four-year college enrollment rates of the 2021 cohorts were between 2.3% at colleges in the Midwest region and 5.4% at colleges in the West region. Two-year college enrollment rates declined in all regions.

Figure 14: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Region of College



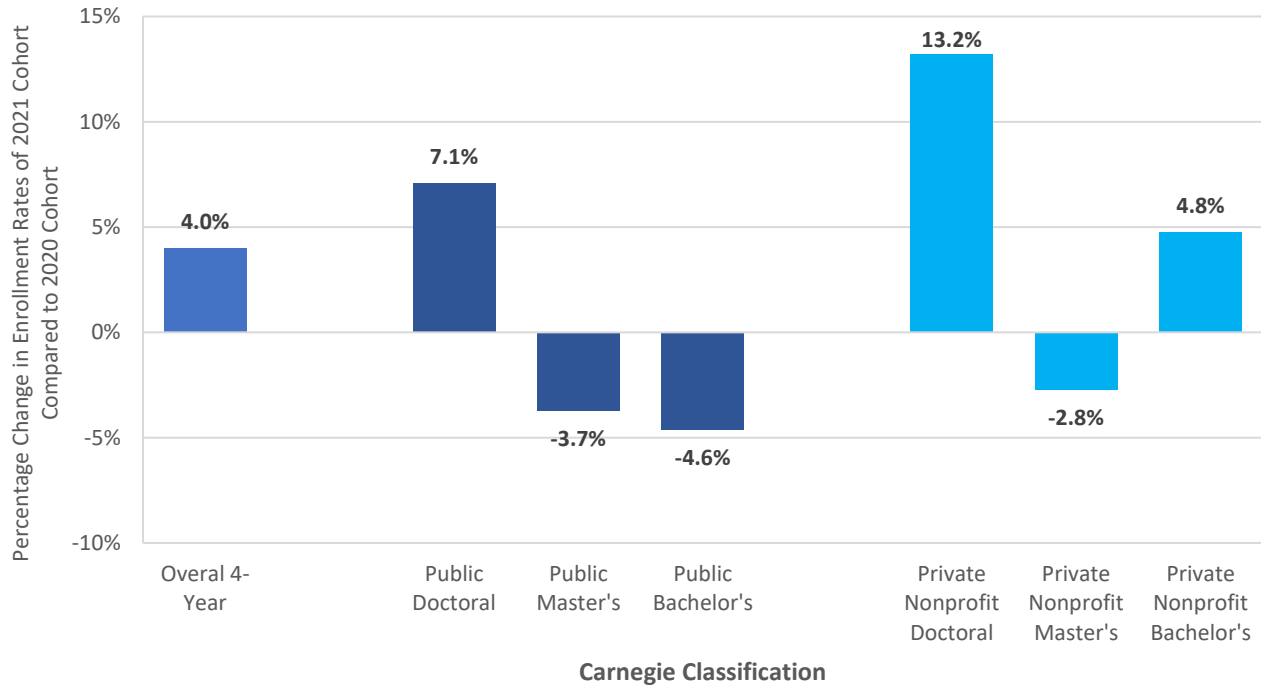
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. Regions are defined as follows: (1) Middle States—DC, DE, MD, NJ, NY, and PA; (2) Midwest—IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WV, and WI; (3) New England—CT, ME, MA, NH, RI, and VT; (4) South—AL, FL, GA, KY, LA, MS, NC, SC, TN, VA, and PR; (5) Southwest—AR, NM, OK, and TX; and (6) West—AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA, and WY.

- Increases in public four-year enrollment rates were highest at colleges in the West region. Increases in private nonprofit four-year enrollment rates were highest at colleges in New England (online Appendix Table 4).

Enrollment Rate Changes by Carnegie Classification

Within the public four-year sector, enrollment rates of the 2021 cohort increased at doctoral institutions and declined at master’s and bachelor’s institutions. Within the private nonprofit four-year sector, enrollment rates increased at doctoral and bachelor’s institutions and declined at master’s institutions.

Figure 15: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Carnegie Classification



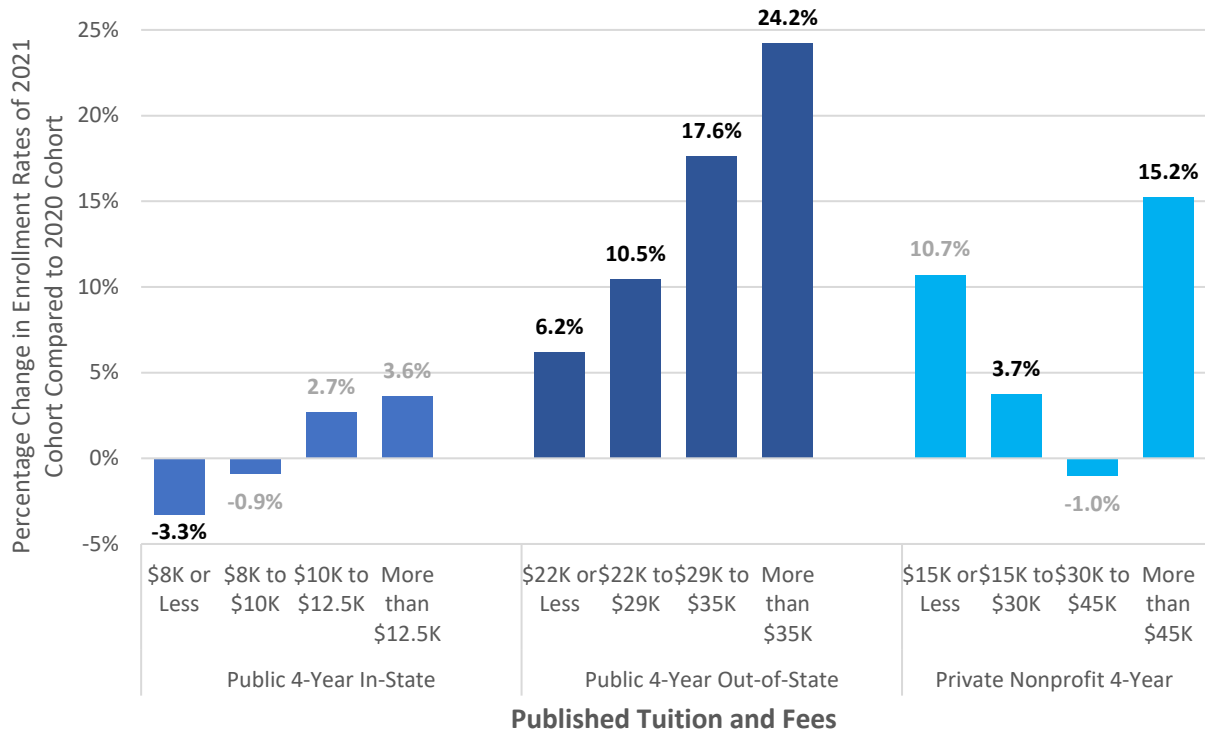
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level.

- “Doctoral universities” include institutions that awarded at least 20 research or scholarship doctoral degrees during the update year and also institutions with below 20 research or scholarship doctoral degrees that awarded at least 30 professional practice doctoral degrees in at least 2 programs; “master’s colleges and universities” include institutions that award at least 50 master’s and fewer than 20 doctoral degrees; “bachelor’s colleges” include institutions where bachelor’s degrees represent at least 50% of all degrees but where fewer than 50 master’s or 20 doctoral degrees were awarded during the update year. All of the categories above exclude “special focus institutions” and “tribal colleges” (Indiana University Center for Postsecondary Research).

Enrollment Rate Changes by Published Tuition and Fees at Four-Year Colleges

Compared to the 2020 cohort, enrollment rates of the 2021 cohort increased by 15.2% at private nonprofit colleges that charged more than \$45,000 in tuition and fees and by 3.7% at those that charged between \$15,000 and \$30,000.

Figure 16: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Four-Year Published Tuition and Fees



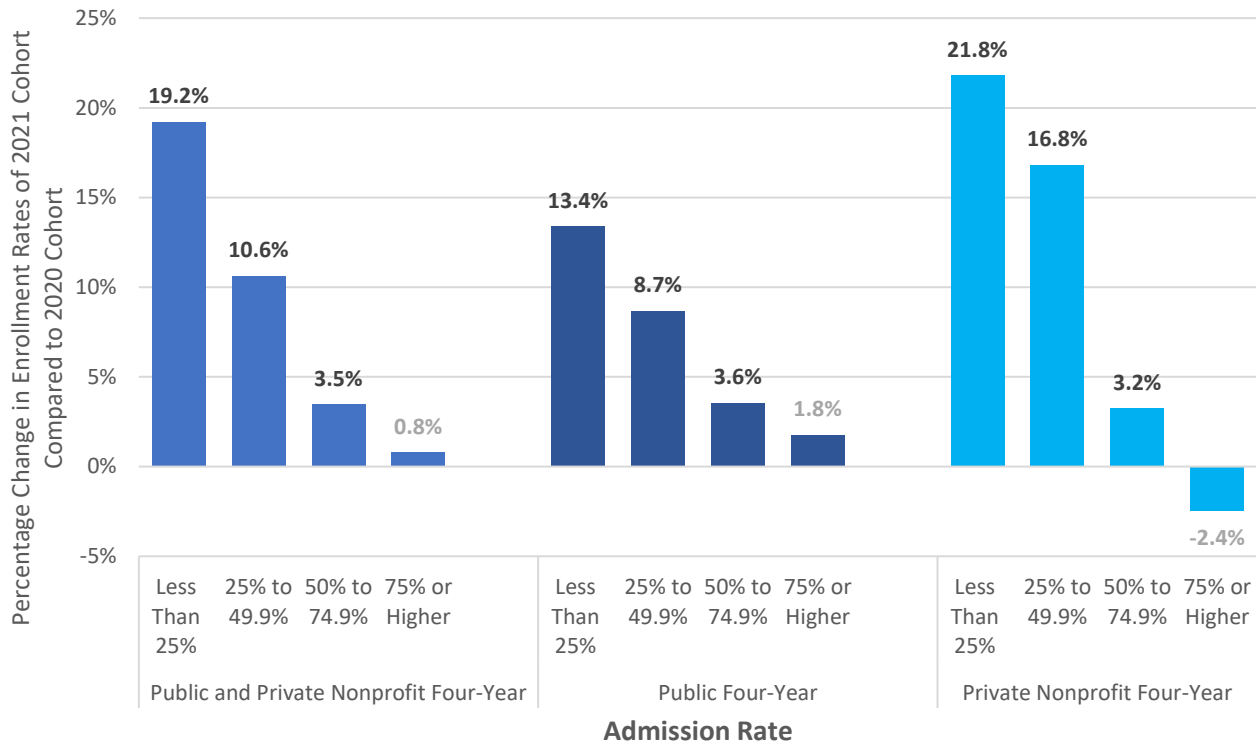
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. Tuition and fees are for the 2019-20 academic year.

- In-state enrollment rates of the 2021 cohort declined at public institutions that charged \$8,000 or less in tuition and fees. The estimated changes are statistically insignificant at colleges with higher tuition.
- Out-of-state enrollment rates of the 2021 cohort increased at public institutions across all tuition groups with higher increases at colleges with higher tuition.

Enrollment Rate Changes by Sector and Admission Rate

Four-year enrollment rates of the 2021 cohort increased at colleges that admitted less than 75% of applicants and were essentially flat among four-year colleges with admission rates of 75% or above. Increases in enrollment rates were higher at more selective colleges.

Figure 17: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Admission Rate



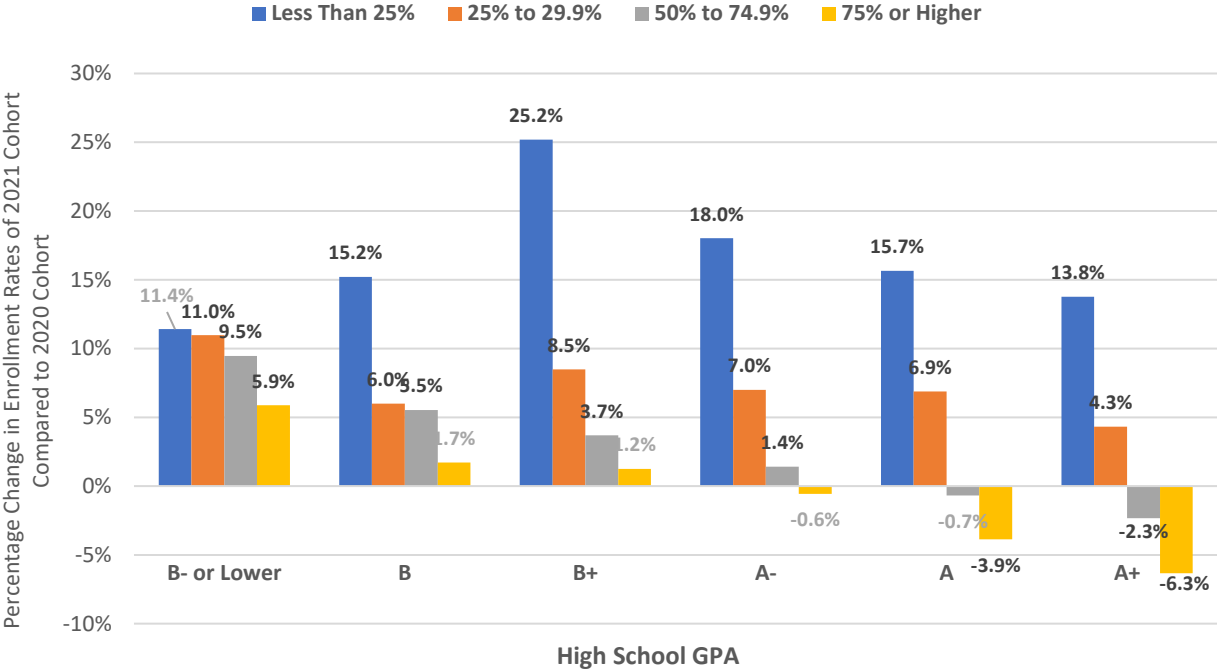
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. Admission rates were for fall 2018 entering cohort.

- At colleges that admitted fewer than 25% of applicants, enrollment rates increased by 13.4% at public colleges and by 21.8% at private colleges. At colleges that admitted 50% to 75% of applicants, enrollment rates increased by 3.6% at public colleges and by 3.2% at private colleges.

Enrollment Rate Changes by High School GPA and Admission Rate

Compared to the 2020 cohort, four-year enrollment rates increased among students in the 2021 cohort with GPAs of B- or lower at colleges across all admission groups. Among students with GPAs of A+, four-year enrollment rates increased at colleges that admitted fewer than 50% of applicants and declined at colleges that admitted more than 50% of applicants.

Figure 18: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to 2020 Cohort, by High School GPA and Admission Rate



Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. High school GPA is self-reported.

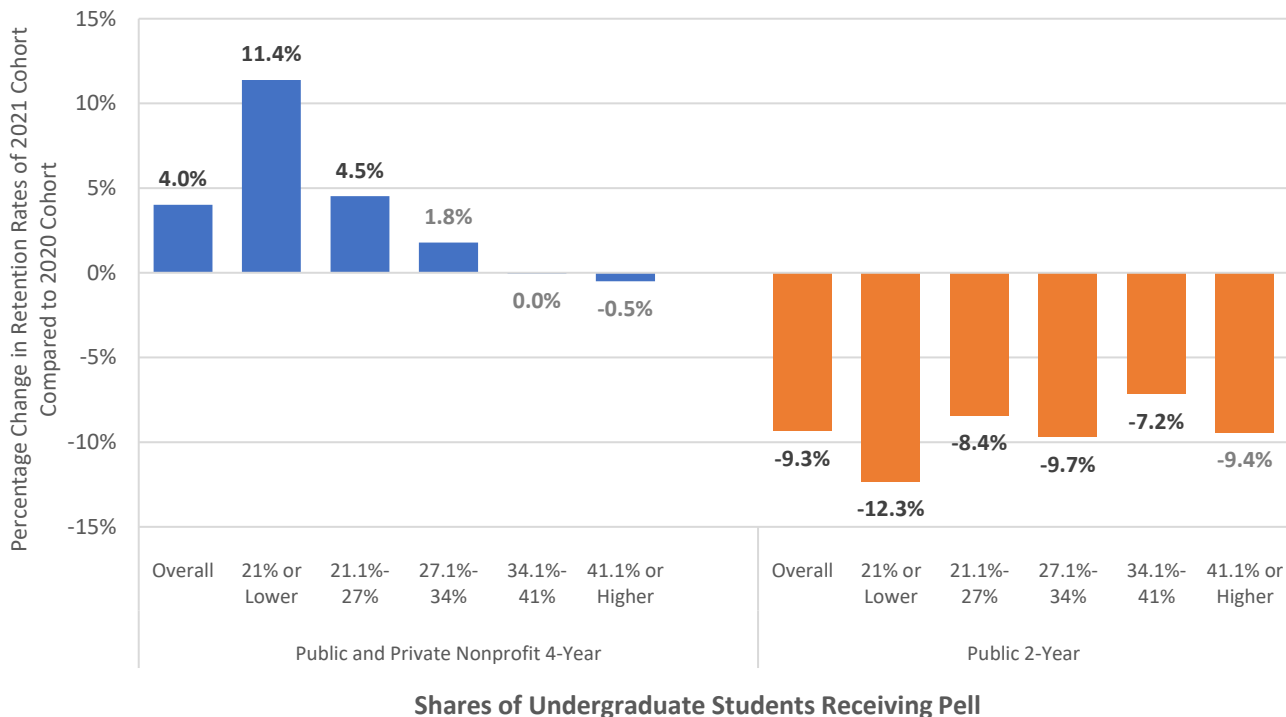
- Across all high school GPAs, increases in four-year enrollment rates were highest at the most selective institutions.
- Compared to their 2020 cohort counterparts, A and A+ students in the 2021 cohort were more likely to enroll in selective four-year colleges and less likely to enroll in less selective colleges, suggesting shifts in where students enroll. Among students with GPAs of B+ or lower, there was no decline in four-year enrollment rates at less selective colleges, suggesting that some students may be shifting from two-year colleges to four-year colleges.¹⁰

¹⁰ Anecdotal evidence from community college leaders provides support for students shifting from community colleges toward more selective universities (Knox and Weissman 2022).

Enrollment Rate Changes by Sector and Pell Share

Four-year college enrollment rates of the 2021 cohort increased the most at colleges with the lowest shares of Pell students. By contrast, two-year college enrollment rates declined the most at colleges with the lowest shares of Pell students.

Figure 19: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by Pell Share



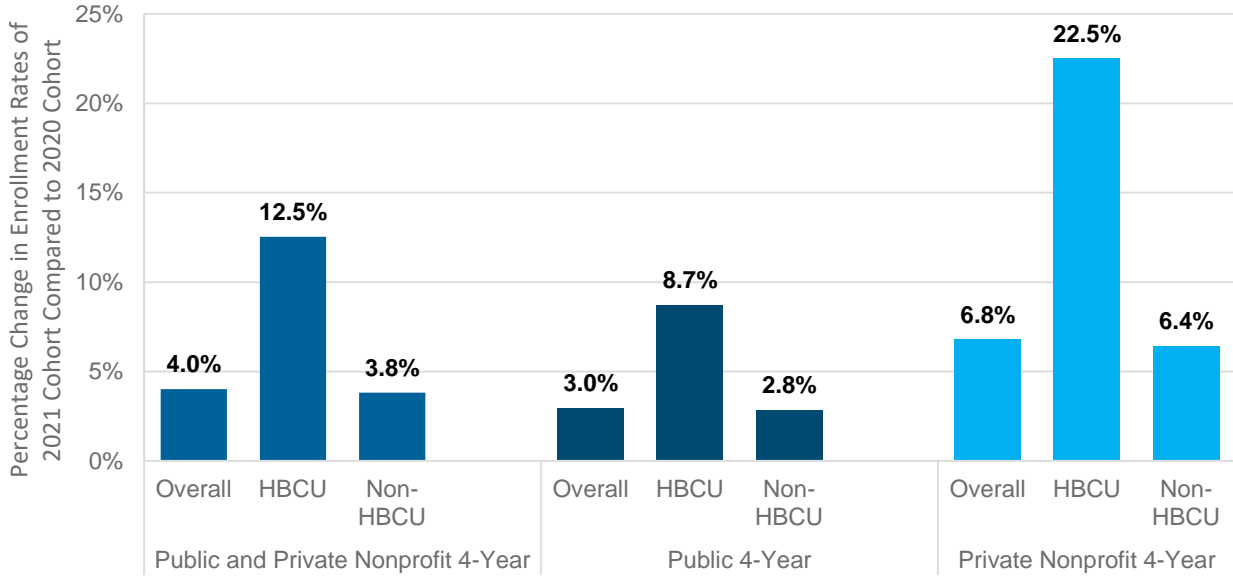
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. Shares of students receiving Pell are from IPEDS and are for 2018-19. Students are grouped into five quintiles.

- Two-year college enrollment rates declined by 12.3% at two-year institutions where 21% or fewer undergraduates received Pell Grants and by 7% to 10% at institutions with higher shares of Pell students.
- Four-year college enrollment rates increased by 11.4% at institutions where 21% or fewer undergraduates received Pell Grants, by 4.5% at institutions where between 21% and 27% of undergraduates received Pell and remained unchanged at institutions where more than 27% of undergraduates received Pell.
- Both public and private nonprofit four-year college enrollment rates increased the most at colleges with the lowest shares of Pell students (online Appendix Table 4).

Enrollment Rate Changes by Sector and HBCU Status

Compared to the 2020 cohort, the four-year college enrollment rates of the 2021 cohort increased by 12.5% at HBCUs and by 3.8% at non-HBCUs.

Figure 20: Percentage Change in Regression-Adjusted Enrollment Rates of the 2021 Cohort Compared to the 2020 Cohort, by HBCU Status



Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level.

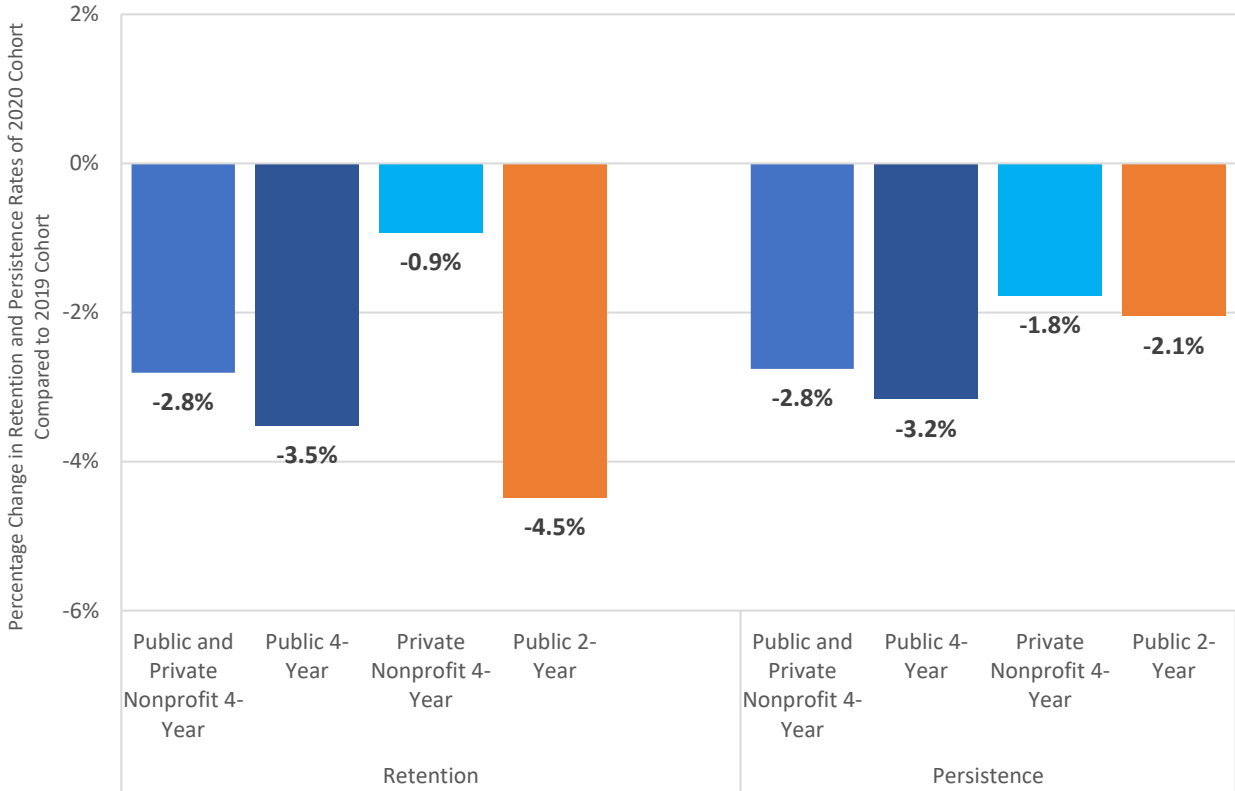
- Compared to the 2020 cohort, the four-year college enrollment rates of the 2021 cohort increased by 8.7% at public HBCUs and by 2.8% at public non-HBCUs.
- Compared to the 2020 cohort, the four-year college enrollment rates of the 2021 cohort increased by 22.5% at private nonprofit HBCUs and by 6.4% at private nonprofit non-HBCUs.
- There are 39 public four-year and 42 private non-profit four-year HBCU institutions.

Section 3: Regression-Adjusted Percentage Changes in Retention Rates

Retention and Persistence Rate Changes by Sector

First-year retention rates among students in the 2020 entering cohort, whose final months of high school and first year in college were disrupted by the pandemic, declined by 3.5% in the public four-year sector, by 0.9% in the private nonprofit four-year sector, and by 4.5% in the public two-year sector compared to the 2019 entering cohort.

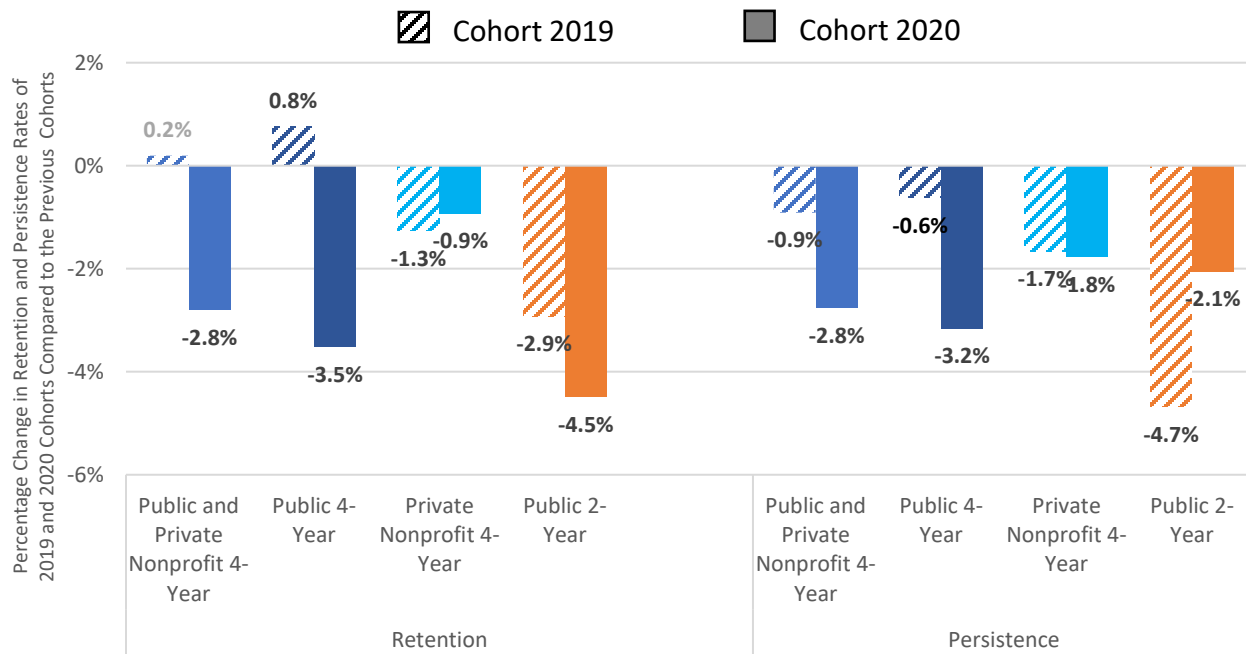
Figure 21A: Percentage Change in Regression-Adjusted Retention and Persistence Rates of the 2020 Cohort Compared to the 2019 Cohort, by Sector



Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level.

- Student retention is defined as re-enrollment in the same postsecondary institution, while student persistence is defined as re-enrollment in any postsecondary institution.
- Compared to the 2019 cohort, first-year persistence rates among students in the 2020 cohort declined by 3.2% in the public four-year sector, by 1.8% in the private nonprofit four-year sector, and by 2.1% in the public two-year sector.

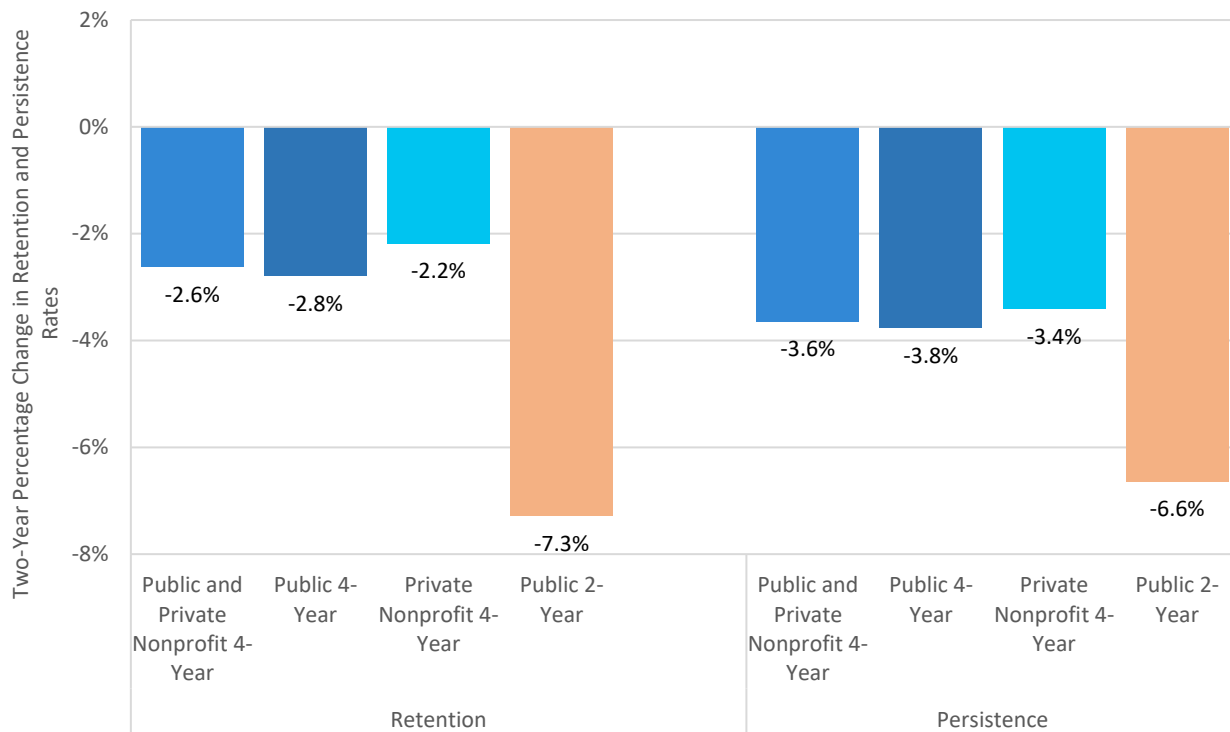
Figure 21B: Percentage Change in Regression-Adjusted Retention and Persistence Rates of the 2019 and 2020 Cohorts Compared to the Previous Cohorts, by Sector



Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level.

- First-year retention rates declined by 3.5% in the public four-year sector among students in the 2020 cohort compared to the previous cohort. Retention rates among students in the 2019 entering cohort (for whom the start of the pandemic disrupted the final months of their freshmen year) increased by 0.8% in the public four-year sector compared to the 2018 cohort. In the private non-profit four-year and public two-year sectors, first-year retention rates declined among both 2019 and 2020 cohorts, relative to the previous cohorts.
- First-year persistence rates declined by 3.2% in the public four-year sector among students in the 2020 cohort compared to the previous cohort. Persistence rates among students in the 2019 entering cohort remained unchanged in the public four-year sector compared to the 2018 cohort. In the private non-profit four-year and public two-year sectors, first-year persistence rates declined among both the 2019 and 2020 cohorts relative to the previous cohorts.

Figure 21C: Percentage Change in Regression-Adjusted Retention and Persistence Rates of the 2020 Cohort Compared to the 2018 Cohort, by Sector



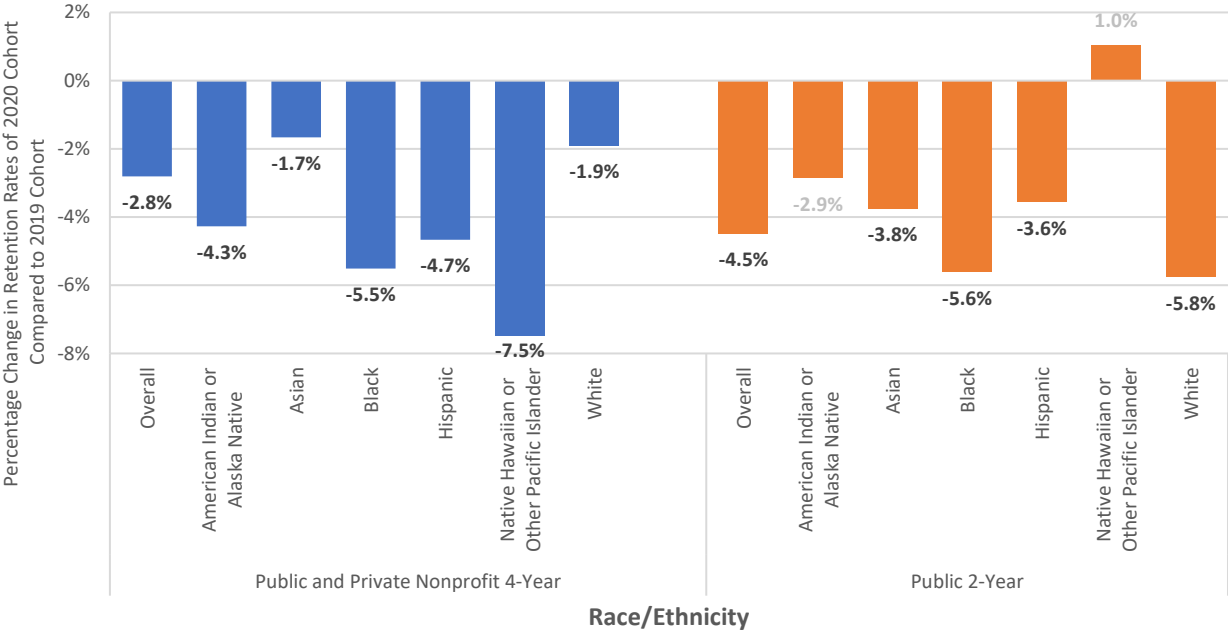
Note: Based on students who took the PSAT.

- First-year retention and persistence rates of the two cohorts of students affected by the pandemic declined the most among students in the public two-year sector.
- Compared to the 2018 entering cohort, first-year retention rates among students in the 2019 and 2020 entering cohorts declined by 2.8% in the public four-year sector, by 2.2% in the private nonprofit four-year sector, and by 7.3% in the public two-year sector.
- Compared to the 2018 entering cohort, first-year persistence rates among students in the 2019 and 2020 entering cohorts declined by 3.8% in the public four-year sector, by 3.4% in the private nonprofit four-year sector, and by 6.6% in the public two-year sector.
- Because of the similar patterns between retention and persistence results, we focus only on the retention results in the remainder of this section.

Retention Rate Changes by Sector and Race/Ethnicity

Students in all racial/ethnic groups in the 2020 cohort saw declines in first-year retention rates compared to their 2019 counterparts. In the four-year sector, the declines were larger among URM students compared to their non-URM counterparts.

Figure 22: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Race/Ethnicity



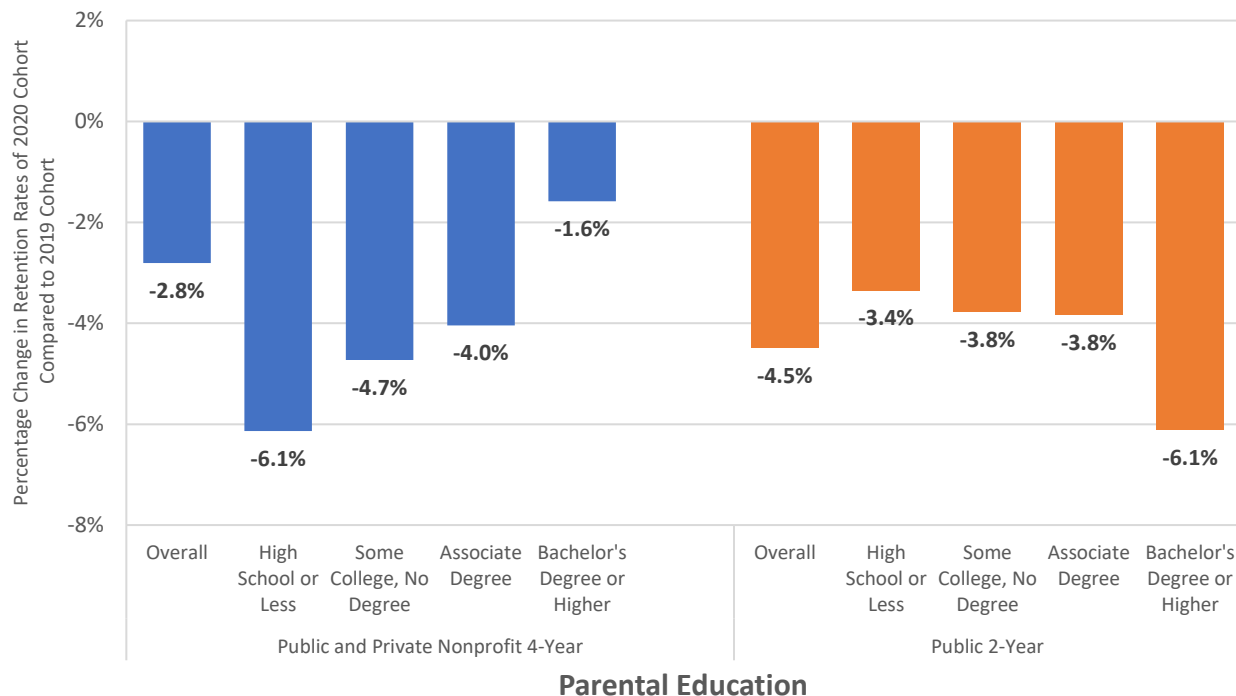
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level.

- The percentage change in first-year retention rates among two-year college students in the 2020 cohort compared to the 2019 cohort ranged from a statistically insignificant 1% increase among Native Hawaiian students to a nearly 6% decline for Black and White students.
- White and Asian students in the 2020 cohort saw no change in retention rates in the private nonprofit four-year sector, while the declines were 2.8% among Hispanic students, 4.0% among American Indian/Alaska Native students, 4.2% among Black students, and 5.1% among Native Hawaiian/Other Pacific Islander students (online Appendix Table 5).
- In the public four-year sector, students in all racial/ethnic groups in the 2020 cohort saw declines in first-year retention rates compared to their 2019 counterparts. The declines were about 2.5% for Asian and White students and between 4.1% and 8.3% for students in other groups (online Appendix Table 5).

Retention Rate Changes by Sector and Parental Education

Compared to the 2019 cohort, first-year retention rates among four-year college students in the 2020 cohort declined by 1.6% for those whose parents had a bachelor's degree or higher and by between 4.0% and 6.1% for students whose parents did not hold a bachelor's degree.

Figure 23: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Parental Education



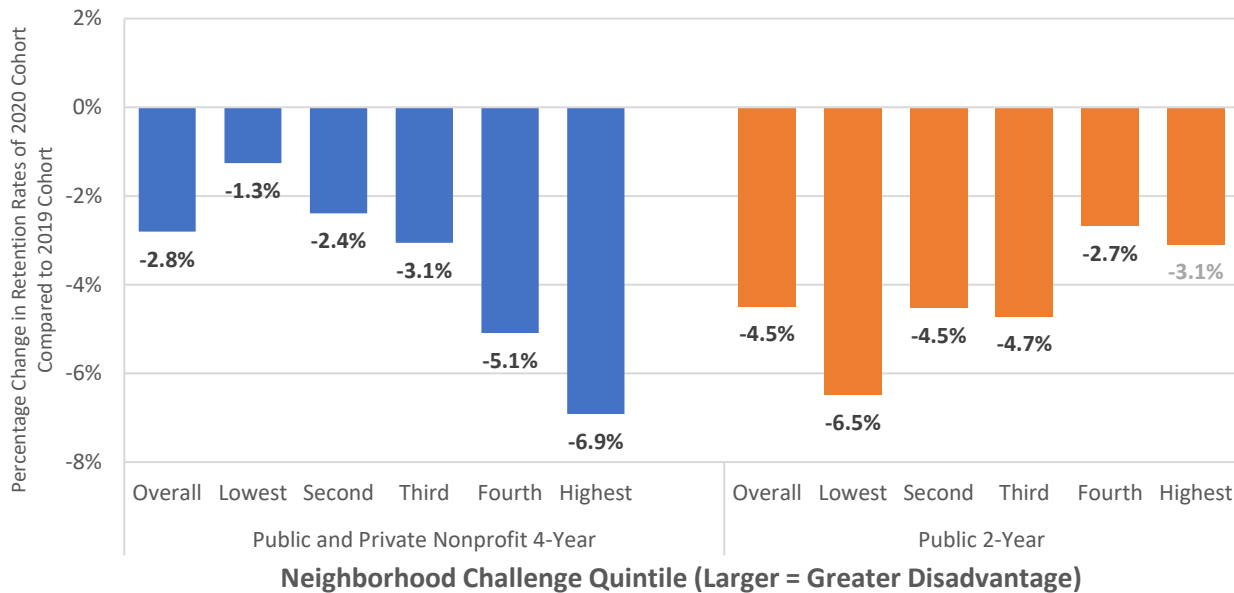
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level.

- Compared to the 2019 cohort, the first-year retention rates among public two-year college students in the 2020 cohort declined across all parental education levels. The declines ranged from 3.4% for students whose parents did not have any education beyond high school to 6.1% for students whose parents had at least a bachelor's degree.
- In the public four-year sector, students across all parental education levels in the 2020 cohort saw declines in first-year retention rates compared to their 2019 counterparts. The declines were 2.4% for those whose parents had at least a bachelor's degree and between 4.8% and 6.3% for those whose parents did not have a bachelor's degree (online Appendix Table 5).
- In the private nonprofit four-year sector, students in the 2020 cohort whose parents had at least a bachelor's degree saw no changes in the first-year retention rates compared to their 2019 counterparts. The declines were between 1.8% and 5.7% for those whose parents did not hold a bachelor's degree (online Appendix Table 5).

Retention Rate Changes by Sector and Neighborhood Attributes

Disaggregating results by neighborhood attributes reveals that, compared to the 2019 cohort, four-year college students in the 2020 cohort from the highest challenge neighborhoods saw sharper declines in first-year retention rates than students from lower challenge neighborhoods.

Figure 24: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Neighborhood Attributes



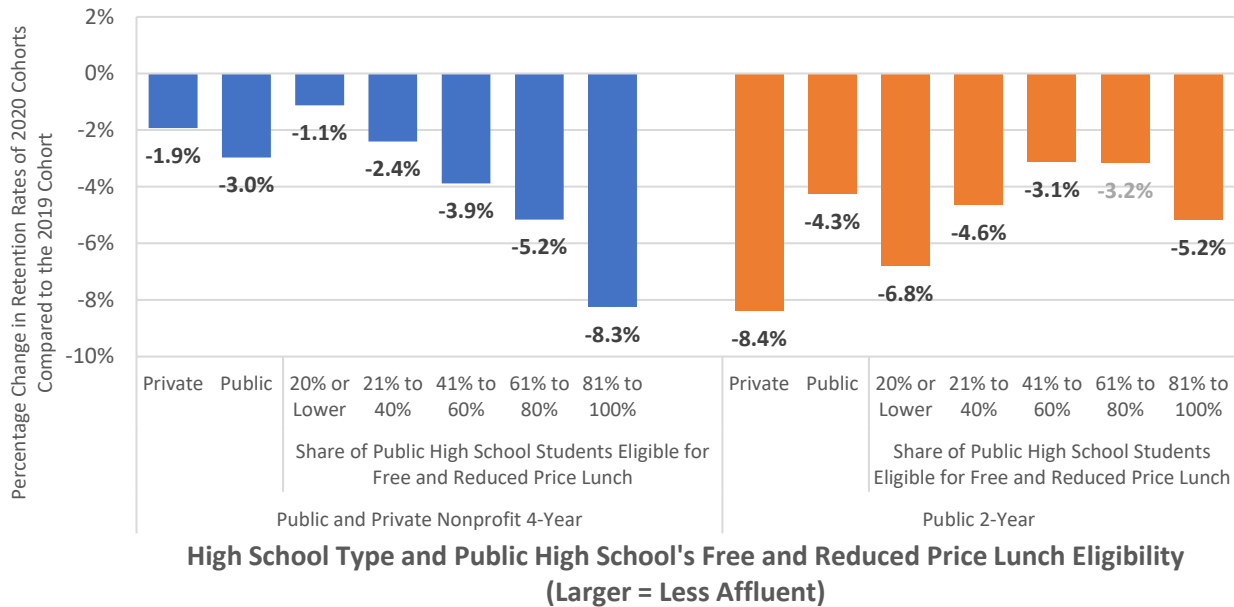
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. The neighborhood challenge measure is comprised of six indicators at the census tract level, including college attendance, household structure, median family income, housing stability, education level, and crime. For more information about these measures, see: <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

- Compared to the 2019 cohort, two-year college students in the 2020 cohort from lower challenge neighborhoods saw sharper declines in first-year retention rates. Declines ranged from about 3% for those students in the highest challenge neighborhoods to 6.5% for those coming from the lowest challenge neighborhoods.
- Compared to the 2019 cohort, public four-year college students in the 2020 cohort saw decreases in first-year retention rates across all challenge levels, ranging from 2.1% for those from the lowest challenge neighborhoods to 7.0% for those from the highest challenge neighborhoods (online Appendix Table 5).
- Compared to the 2019 cohort, private nonprofit four-year students in the 2020 cohort from the highest challenge neighborhoods experienced a 6.7% decline in retention rates—a decline larger than what students from lower challenge neighborhoods experienced (online Appendix Table 5).

Retention Rate Changes by Sector and High School Free and Reduced Price Lunch (FRPL) Eligibility

Compared to the 2019 cohort, four-year college students in the 2020 cohort from less affluent high schools saw larger declines in first-year retention rates than students from other high schools.

Figure 25: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by High School Free and Reduced Price Lunch Eligibility



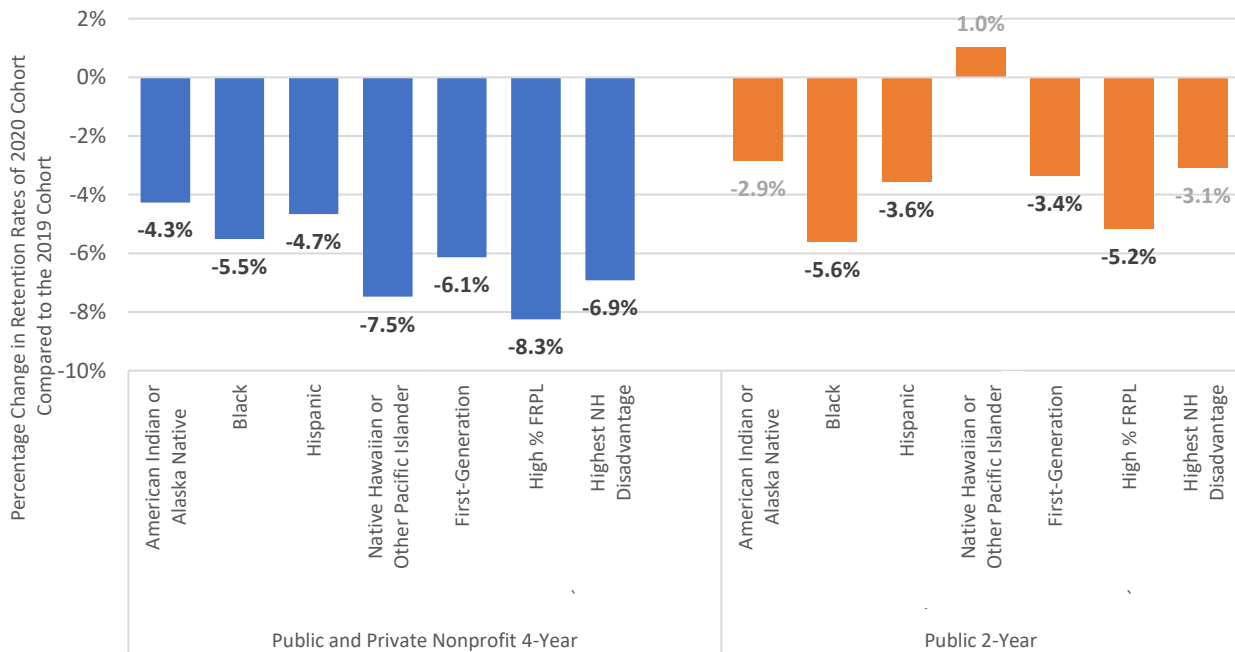
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. High School Free and Reduced Price Lunch Eligibility is from the National Center for Education Statistics's Common Core of Data.

- Compared to the 2019 cohort, four-year college students in the 2020 cohort from public high schools saw a 3.0% decline in first-year retention rates, compared to a 1.9% decline for those from private high schools.
- Compared to the 2019 cohort, public two-year college students in the 2020 cohort saw declines in first-year retention rates across all school types and FRPL levels. The declines were 8.4% and 4.3% for those from private and public high schools, respectively.
- Compared to the 2019 cohort, four-year college students in the 2020 cohort saw declines in first-year retention rates across high school types and FRPL levels, ranging from 1.1% for those from more affluent public high schools to 8.3% for those from the least affluent public high schools.
- Compared to the 2019 cohort, private nonprofit four-year college students in the 2020 cohort attending the wealthiest public high schools experienced 0.7% increase in first-year retention rates, although the estimate is not statistically significant. Students attending high schools where the largest share of students receive FRPL saw 7.3% decline in the first-year retention rates (online Appendix Table 5).

Retention Rate Changes Among Traditionally Underrepresented Students by Sector

Among groups of traditionally underrepresented students, students in the 2020 cohort had lower retention rates than their 2019 cohort counterparts, particularly among students attending four-year colleges. Retention rates declined the most among students who came from high schools where the largest share of students receive free and reduced price lunch (8.3% decline).

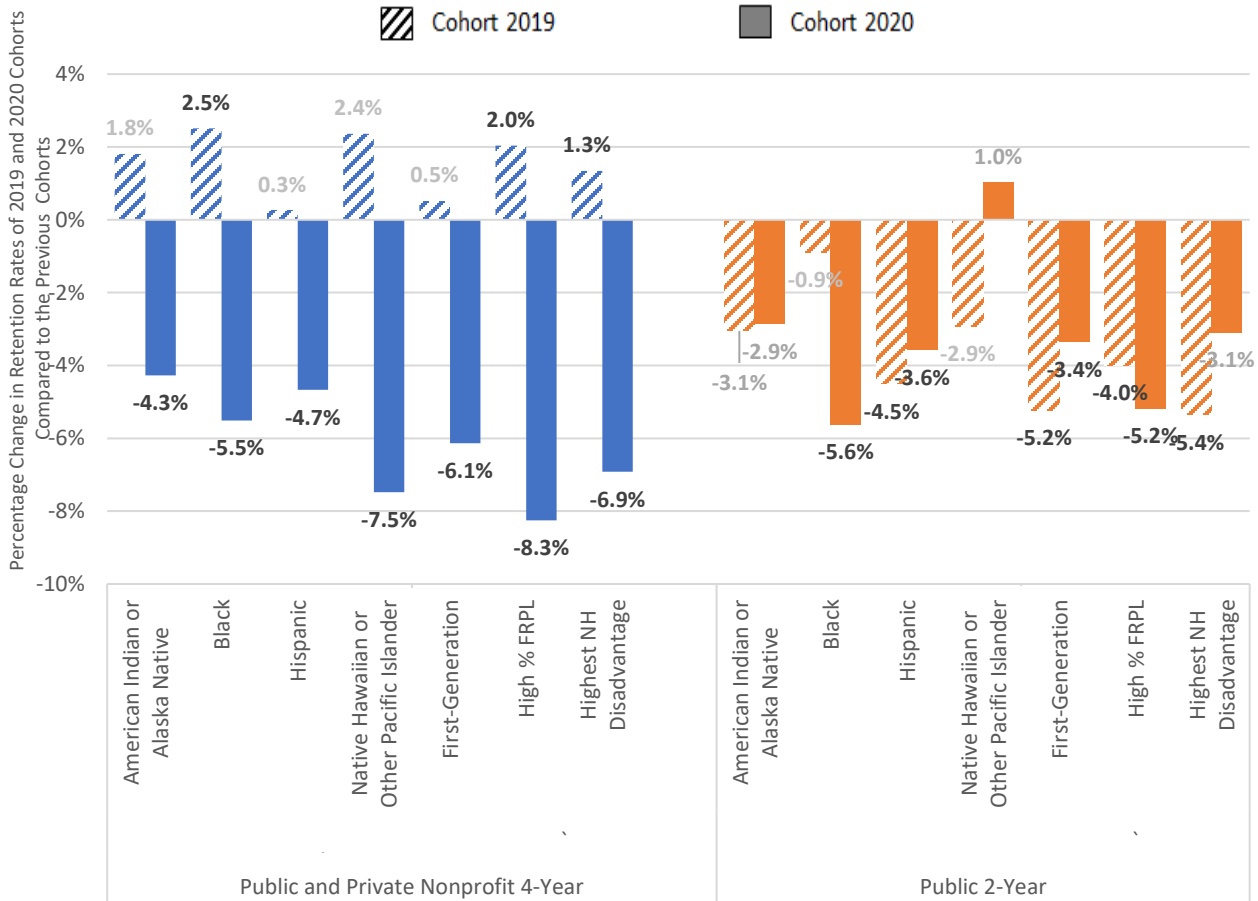
Figure 26A: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort Among Traditionally Underrepresented Students, by Sector



Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. First-generation are students whose parents highest level of education is high school diploma or less. High % FRPL represents students who attended high schools where at least 80% of students are eligible for free or reduced price lunch. High School Free and Reduced Price Lunch Eligibility is from the National Center for Education Statistics’s Common Core of Data. The neighborhood challenge measure is comprised of six indicators at the census tract level, including college attendance, household structure, median family income, housing stability, education level, and crime. For more information about these measures, see: <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

- Combining data from Figures 22 – 25 summarizes changes in college retention rates among student subgroups who are historically underrepresented in higher education.

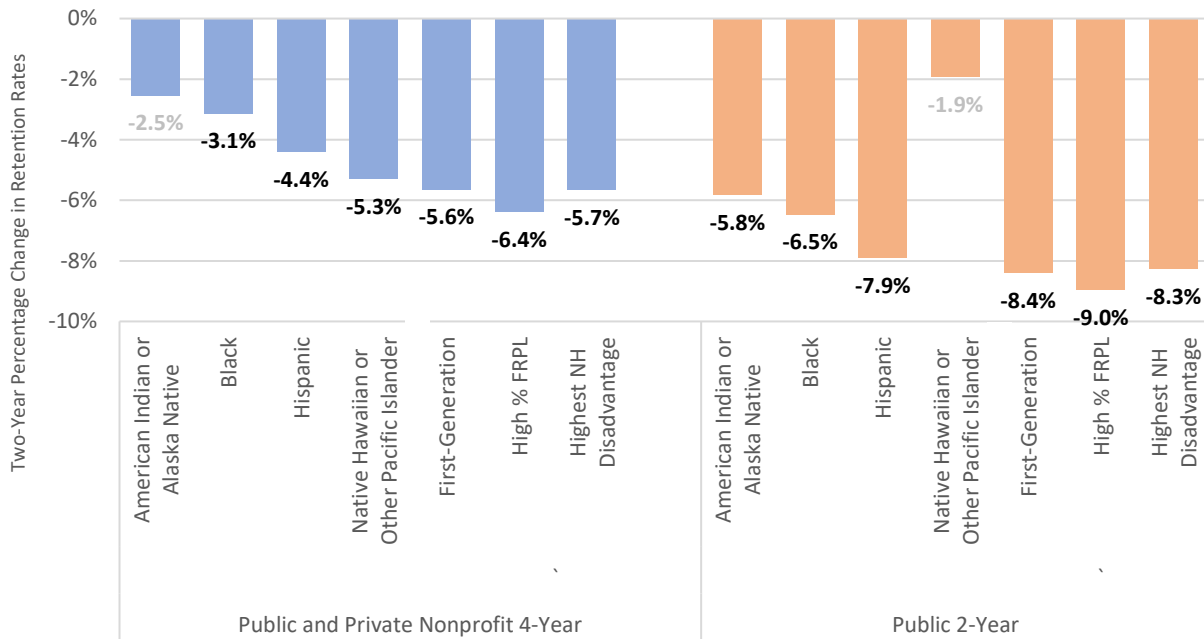
Figure 26B: Percentage Change in Regression-Adjusted Retention Rates of the 2019 and 2020 Cohorts Compared to the Previous Cohorts Among Traditionally Underrepresented Students, by Sector



Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. First-generation are students whose parents highest level of education is high school diploma or less. High % FRPL represents students who attended high schools where at least 80% of students are eligible for free or reduced price lunch. High School Free and Reduced Price Lunch Eligibility is from the National Center for Education Statistics’s Common Core of Data. The neighborhood challenge measure is comprised of six indicators at the census tract level, including college attendance, household structure, median family income, housing stability, education level, and crime. For more information about these measures, see: <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

- Class of 2019 students from historically underrepresented subgroups experienced increases or no change in first-year retention rates in the four-year sector, while four-year retention rates dropped dramatically for these student subgroups in the class of 2020 (Figure 26B).

Figure 26C: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2018 Cohort Among Traditionally Underrepresented Students, by Sector



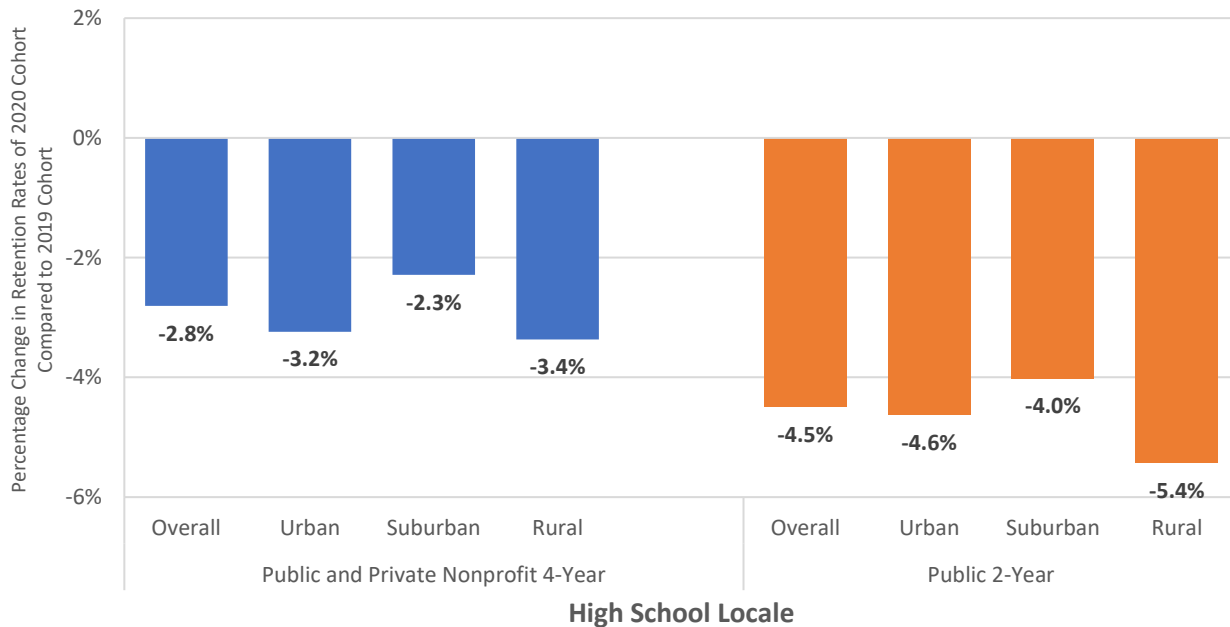
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. First-generation are students whose parents highest level of education is high school diploma or less. High % FRPL represents students who attended high schools where at least 80% of students are eligible for a free or reduced price lunch. High School Free and Reduced Price Lunch Eligibility is from the National Center for Education Statistics’s Common Core of Data. The neighborhood challenge measure is comprised of six indicators at the census tract level, including college attendance, household structure, median family income, housing stability, education level, and crime. For more information about these measures, see: <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

- Compared to the 2018 cohort, who were entirely unaffected by the pandemic during their first year of college, retention rates of students in the 2020 cohort were lower for all traditionally underrepresented subgroups of students. In general, compared to the 2018 pre-pandemic cohort, retention rates declined more among students attending two-year colleges than those attending four-year colleges (Figure 26C).

Retention Rate Changes by Sector and High School Locale

Compared to the 2019 cohort, public two-year and four-year college students in the 2020 cohort from all high school locales saw declines in retention rates. The declines ranged from 5.4% for two-year students from rural high schools to 2.3% among four-year students from suburban high schools.

Figure 27: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by High School Locale



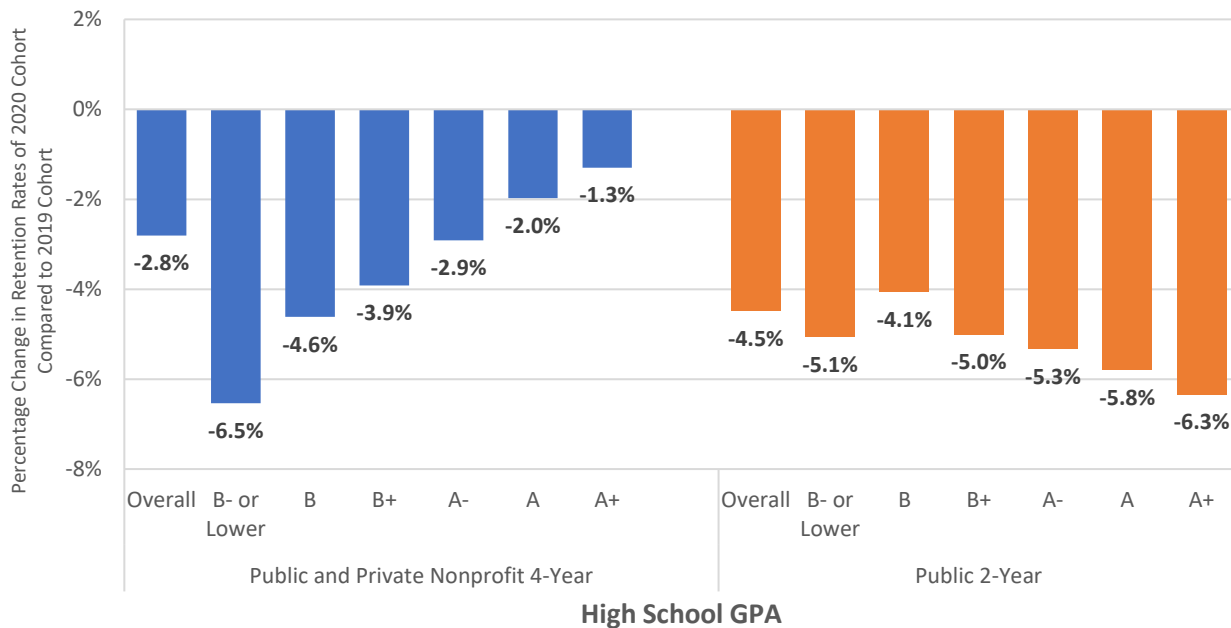
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. High School Locale is from the National Center for Education Statistics's Common Core of Data.

- Compared to the 2019 cohort, public four-year college students in the 2020 cohort saw declines in first-year retention rates across high school locales, ranging from 2.8% for those from suburban high schools to 4.1% for those from urban and rural high schools (online Appendix Table 5).
- Compared to the 2019 cohort, private nonprofit four-year college students in the 2020 cohort saw declines in first-year retention rates across high school locales of about 1% (online Appendix Table 5).

Retention Rate Changes by Sector and High School GPA

Compared to the 2019 cohort, retention rates among four-year college students in the 2020 cohort declined the most for those with lower high school GPAs. The reverse pattern occurred among students attending two-year colleges. Students with the highest high school GPAs experienced the largest declines in retention rates.

Figure 28: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by High School GPA



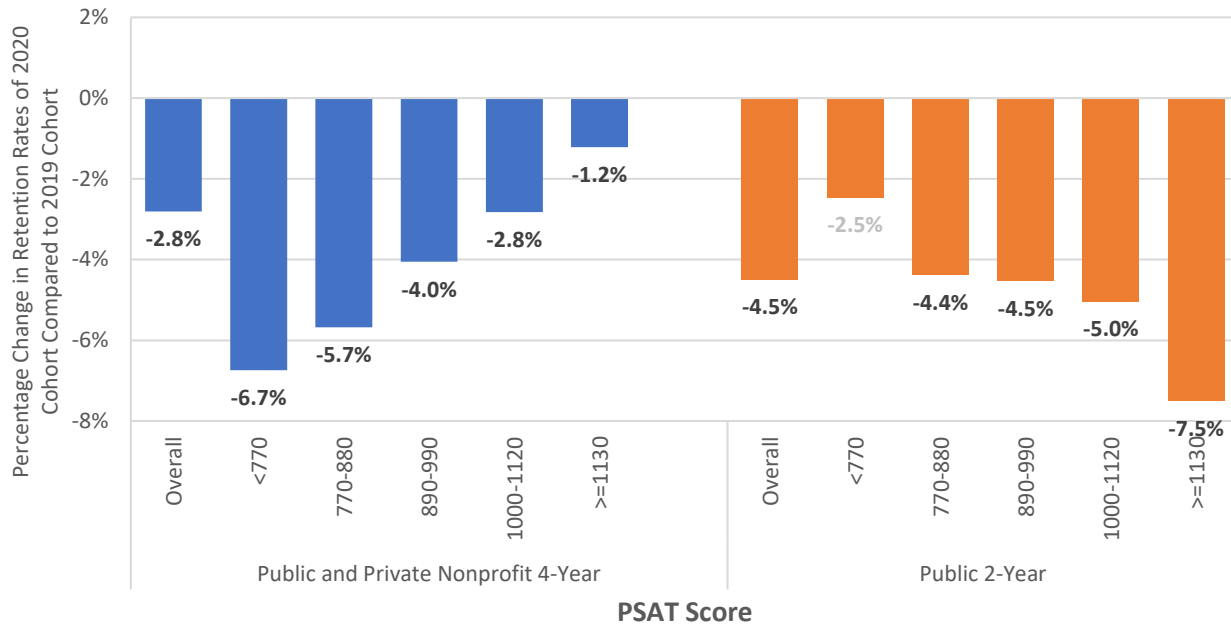
Note: Based on students who took the PSAT. Estimates are statistically significant at the 5% level. High school GPA is self-reported. Similar patterns exist by SAT score (see Appendix Figures 3 and 4).

- Among public two-year students with high school GPAs of B- or lower, retention rates declined by 5.1%, compared to a 6.3% decline for students with high school GPAs of A+.
- Compared to the 2019 cohort, public four-year college students in the 2020 cohort saw declines in first-year retention rates across high school GPA levels, ranging from a 6.6% decline for those with high school GPAs of B- or lower to 2.2% declines for those with GPAs of A+ (online Appendix Table 5).
- Compared to the 2019 cohort, private nonprofit four-year college students in the 2020 cohort saw declines in first-year retention rates for students with high school GPAs of A- or lower, but no change in retention rates among those students with high school GPA of A or higher (online Appendix Table 5).

Retention Rate Changes by Sector and PSAT Score

Compared to the 2019 cohort, retention rates among four-year college students in the 2020 cohort declined the most for those with lower PSAT scores. The reverse pattern occurred among students attending two-year colleges. Students with the highest PSAT scores experienced the largest declines in retention rates.

Figure 29: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by PSAT Score



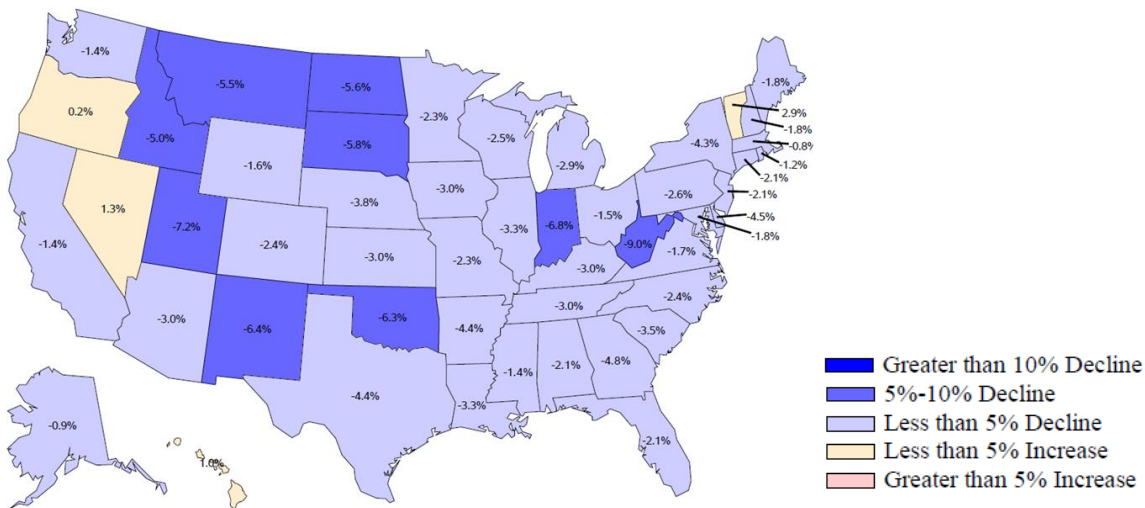
- Among four-year college students with PSAT scores of less than 770, first-year retention rates declined by 6.7%, compared to a 1.2% decline for students with PSAT scores of 1130 or above.
- Two-year retention rates declined by a statistically insignificant 2.5% among the lowest scoring students and 7.5% among the highest scoring students.
- Compared to the 2019 cohort, public four-year college students in the 2020 cohort experienced declines in first-year retention rates ranging from a 6.8% decline for those with PSAT scores of less than 770 to 2.2% decline for those with PSAT scores of 1130 or above. Among students in the private non-profit four-year sector, the ranges were 6.7% decline among the lowest scoring students to 0.8% increase among the highest scoring students (online Appendix Table 5).

Retention Rate Changes by Sector and Student State of Residence

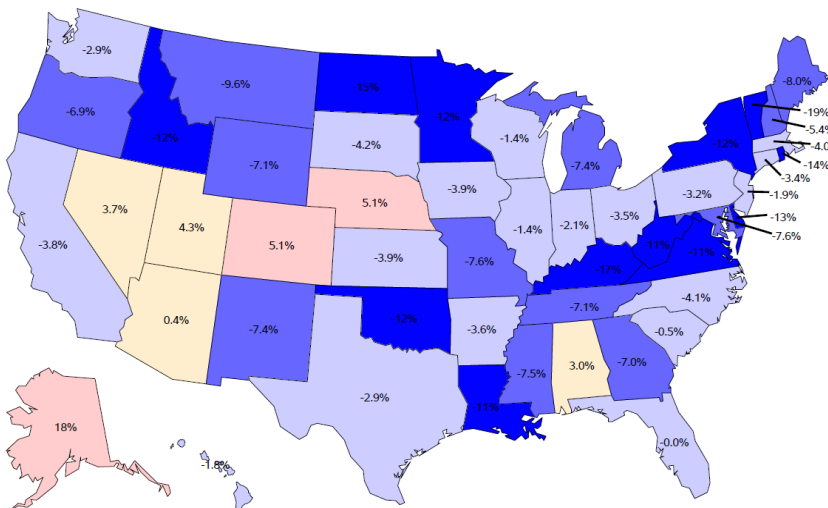
Compared to the 2019 cohort, retention rates among students in the 2020 cohort enrolled in a four-year college ranged from a decline of 9.0% for students from West Virginia to an increase of 2.9% for students from Vermont.

Figure 30: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Student State of Residence

Four-Year



Public Two-Year

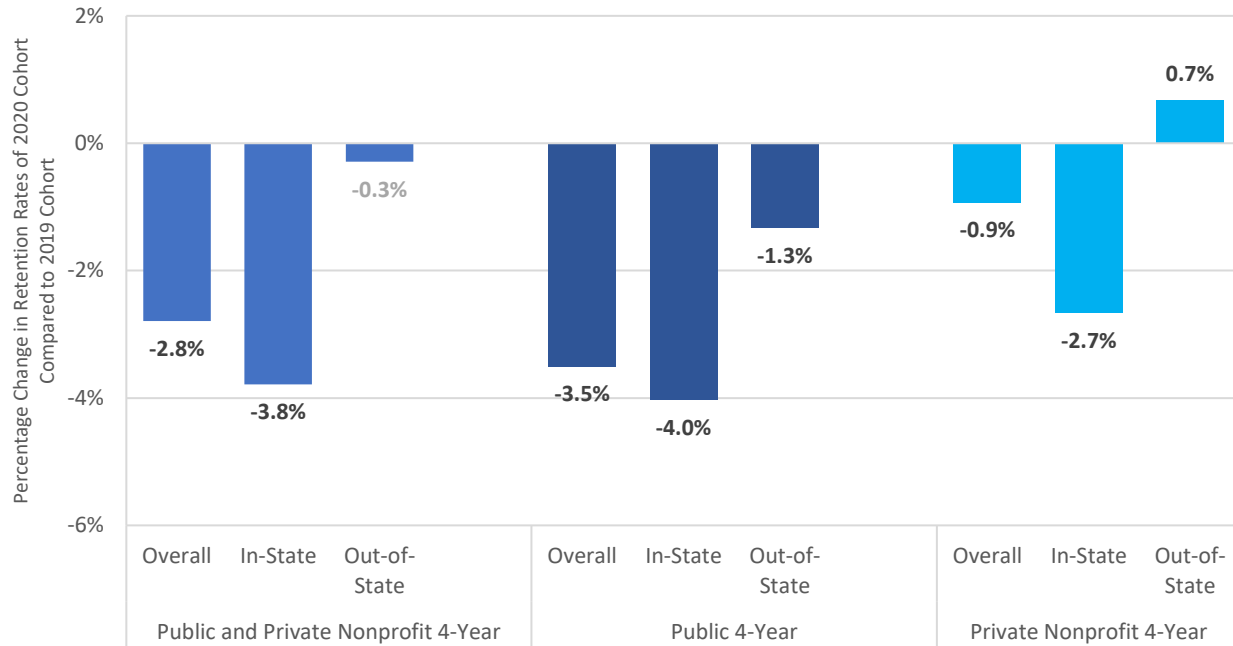


- Compared to the 2019 cohort, retention rates among students in the 2020 cohort enrolled in a public two-year college declined the most for students from Vermont and Kentucky. Students in nine states saw either no change or an increase in first-year retention rates.

Retention Rate Changes by Sector and In-State Status

Compared to the 2019 cohort, retention rates declined more among in-state four-year students than among out-of-state four-year students.

Figure 31: Percentage Change in Regression-Adjusted Four-Year College Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by In-State Status



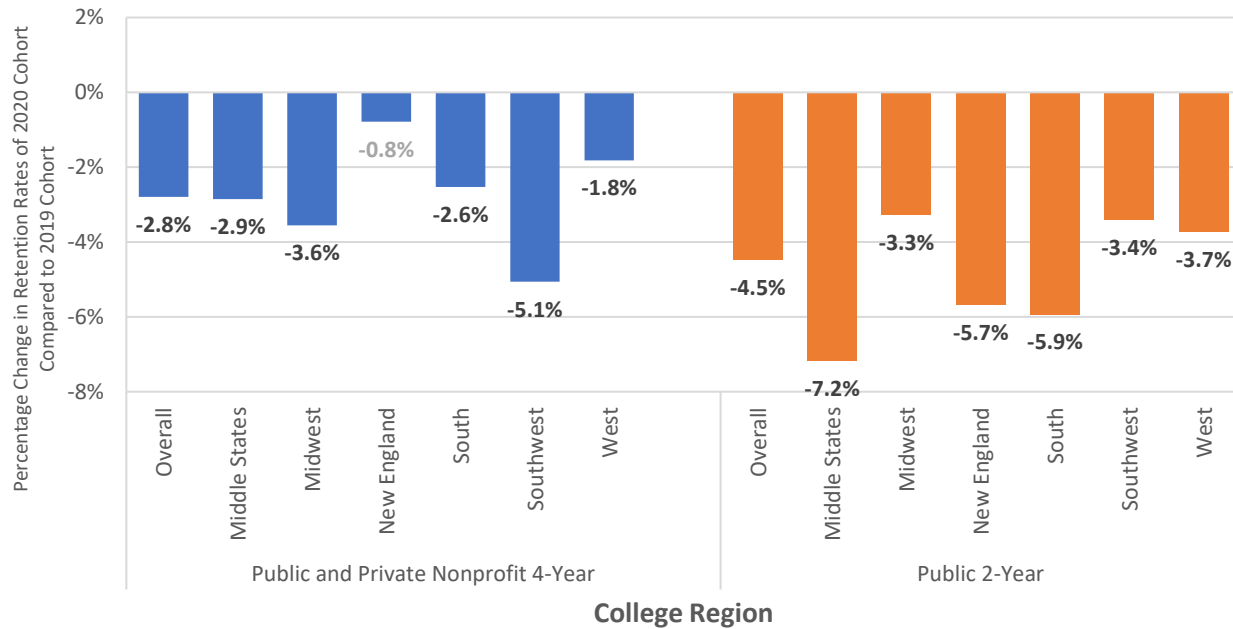
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. Nearly all community college students are in-state.

- Compared to the 2019 cohort, retention rates of students in the 2020 cohort declined by 3.8% among those enrolled in an in-state four-year college and declined by a statistically insignificant 0.3% among those enrolled in an out-of-state four-year college.
- Compared to the 2019 cohort, retention rates of students in the 2020 cohort declined by 2.7% among those enrolled in an in-state private nonprofit four-year college and increased by 0.7% among those enrolled in an out-of-state private nonprofit four-year college.

Retention Rate Changes by Sector and College Region

Compared to the 2019 cohort, retention rates of public two-year college students in the 2020 cohort declined across all regions. The declines ranged from 3.3% in the Midwest to 7.2% in the Middle States.

Figure 32: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Region of College



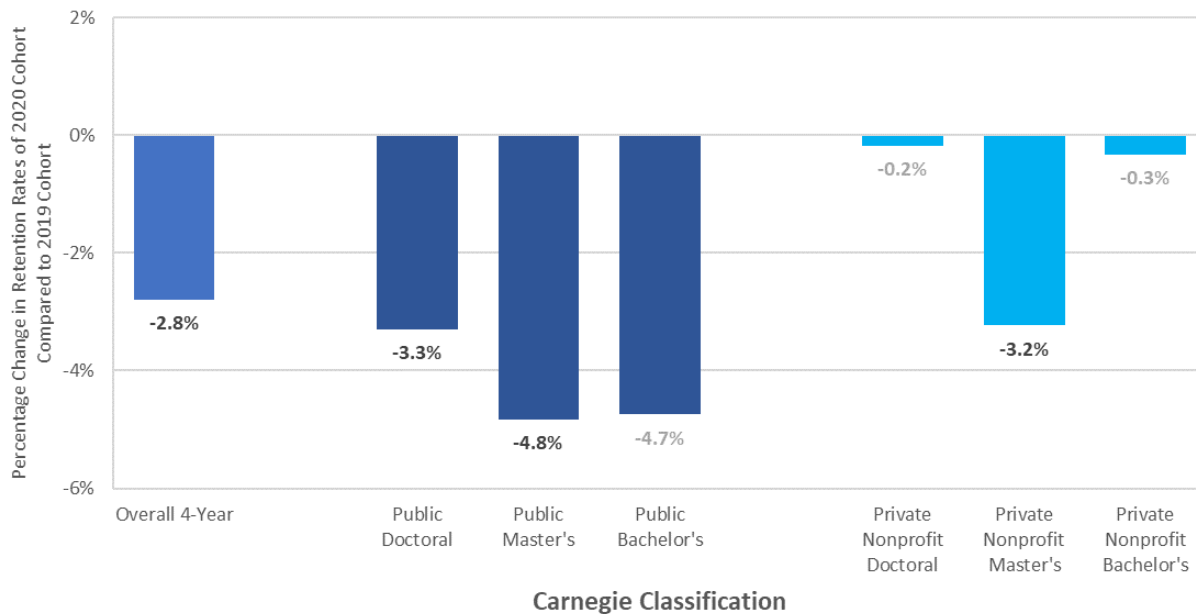
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. Regions are defined as follows: (1) Middle States—DC, DE, MD, NJ, NY, and PA; (2) Midwest—IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WV, and WI; (3) New England—CT, ME, MA, NH, RI, and VT; (4) South—AL, FL, GA, KY, LA, MS, NC, SC, TN, VA, and PR; (5) Southwest—AR, NM, OK, and TX; and (6) West—AK, AZ, CA, CO, HI, ID, MT, NV, OR, UT, WA, and WY.

- Compared to the 2019 cohort, retention rates of public four-year college students in the 2020 cohort declined across all regions. The declines ranged from 2.4% in the West to 5.4% in the Southwest (online Appendix Table 5).
- Compared to the 2019 cohort, retention rates of private nonprofit four-year college students in the 2020 cohort increased by a statistically insignificant 0.8% in New England and 1.3% in West; the retention rates declined in other regions with the largest decline in Southwest (3.3%) (online Appendix Table 5).

Retention Rate Changes by Carnegie Classification

Within the public four-year sector, students in the 2020 cohort saw declines in retention rates compared to the 2019 cohort ranging between 3.3% at public doctoral and 4.8% at public master's colleges.

Figure 33: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Carnegie Classification



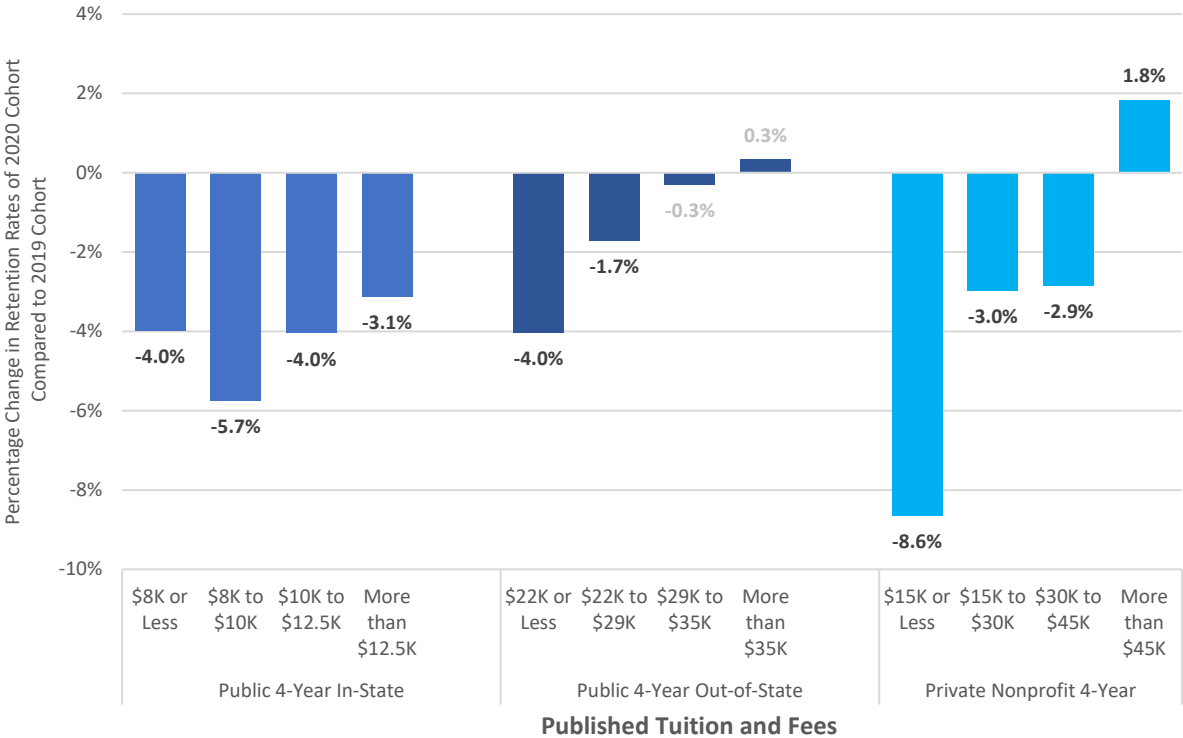
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level.

- Within the private nonprofit four-year sector, students in the 2020 cohort saw a decline of 3.2% in retention rates at private nonprofit master's institutions and a small and statistically insignificant decline at private nonprofit doctoral and bachelor's institutions, compared to the 2019 cohort.
- In the public four-year sector, 69%, 25%, and 6% of students were enrolled in a doctoral, master's, or bachelor's institution, respectively (calculations from online Appendix Table 5).
- In the private nonprofit four-year sector, 46%, 31%, and 24% of students were enrolled in a doctoral, master's, or bachelor's institution, respectively (calculations from online Appendix Table 5).

Retention Rate Changes by Published Tuition and Fees at Four-Year Colleges

Compared to the 2019 cohort, retention rates of students in the 2020 cohort declined by 8.6% among those enrolled in private nonprofit four-year colleges with published tuition and fees of \$15,000 or less and increased by 1.8% among those enrolled in colleges with published prices of more than \$45,000.

Figure 34: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Four-Year Published Tuition and Fees



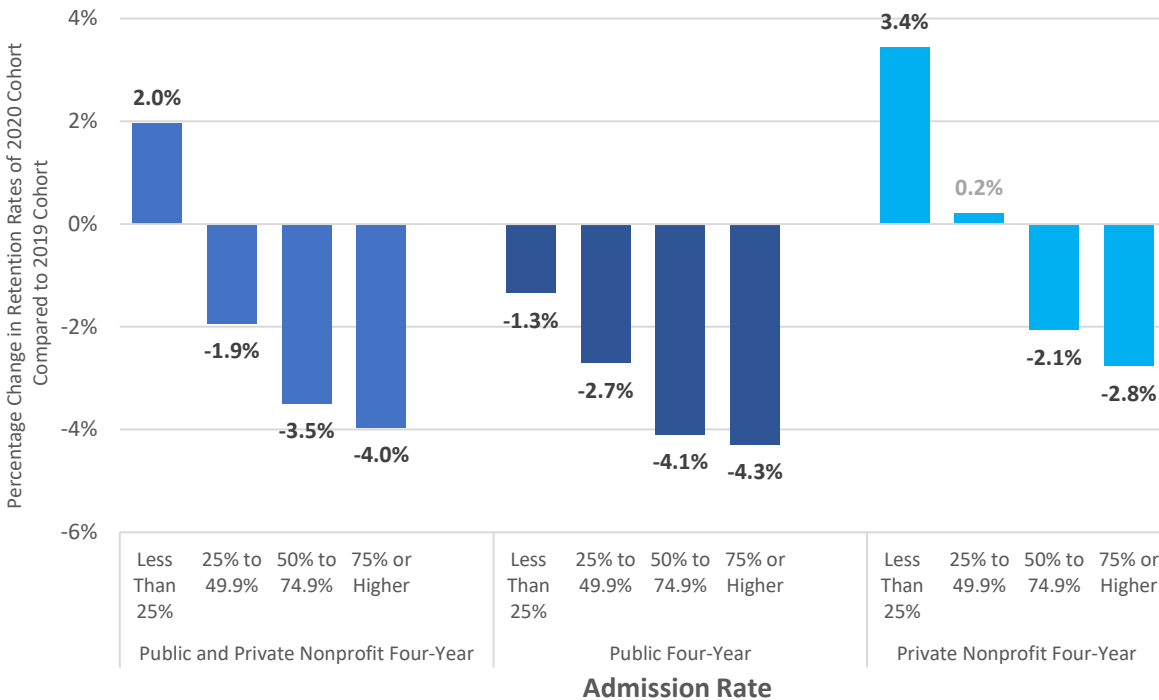
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 10% level. Tuition and fees are for the 2019-20 academic year.

- Compared to the 2019 cohort, retention rates among public four-year in-state students in the 2020 cohort declined across all tuition groups, ranging from 3.1% for those in the highest in-state tuition group to 5.7% for those in the second lowest in-state tuition group.

Retention Rate Changes by Sector and Admission Rate

Retention rate declines between the 2019 and 2020 cohorts were largest among students attending colleges with the highest admission rates. Among students attending the most selective four-year colleges—those admitting fewer than 25% of applicants—retention rates actually increased by 2%.

Figure 35: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Sector and Admission Rate



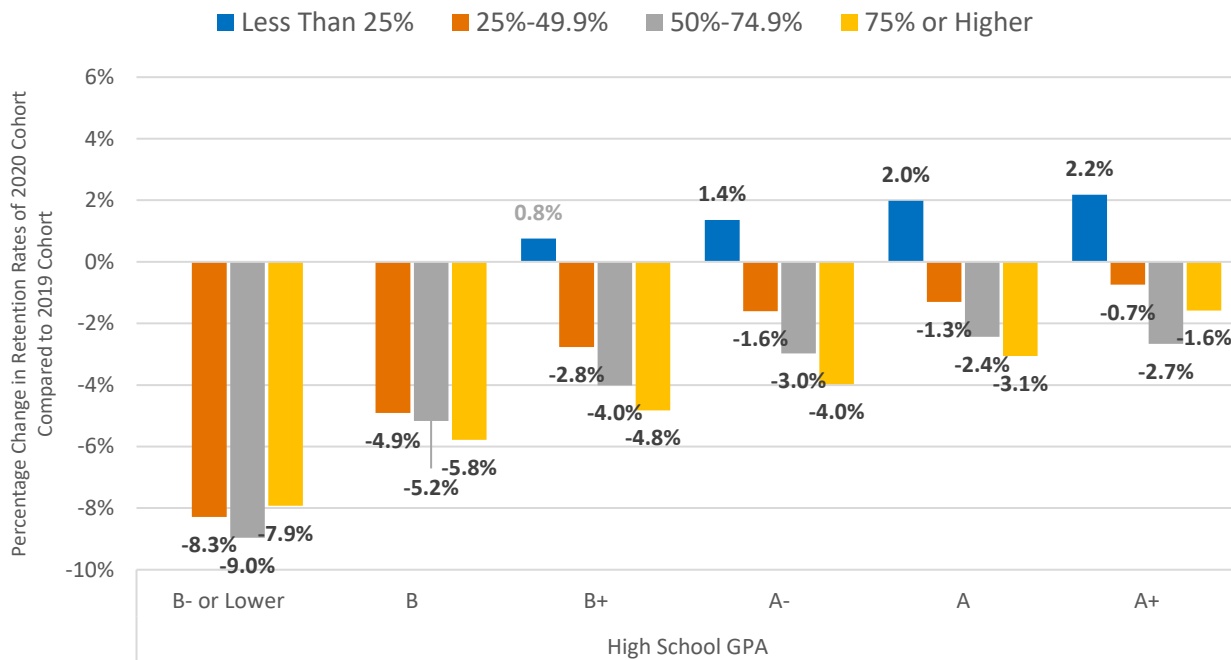
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 10% level. Admission rates were for fall 2018 entering cohort.

- Compared to the 2019 cohort, retention rates of public four-year college students in the 2020 cohort declined by 1.3% among those enrolled in the most selective public four-year colleges and declined by between 2.7% and 4.3% among those enrolled in other colleges.
- Compared to the 2019 cohort, retention rates of private nonprofit four-year college students in the 2020 cohort increased by 3.4% among those enrolled in the most selective colleges, remained unchanged among those enrolled in the second most selective colleges, and declined by about 2-3% among those enrolled in other colleges.

Retention Rate Changes by Admission Rate and High School GPA

Within most high school GPA categories, retention rate declines were steeper among students attending colleges admitting larger shares of students.

Figure 36: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Admission Rate and High School GPA



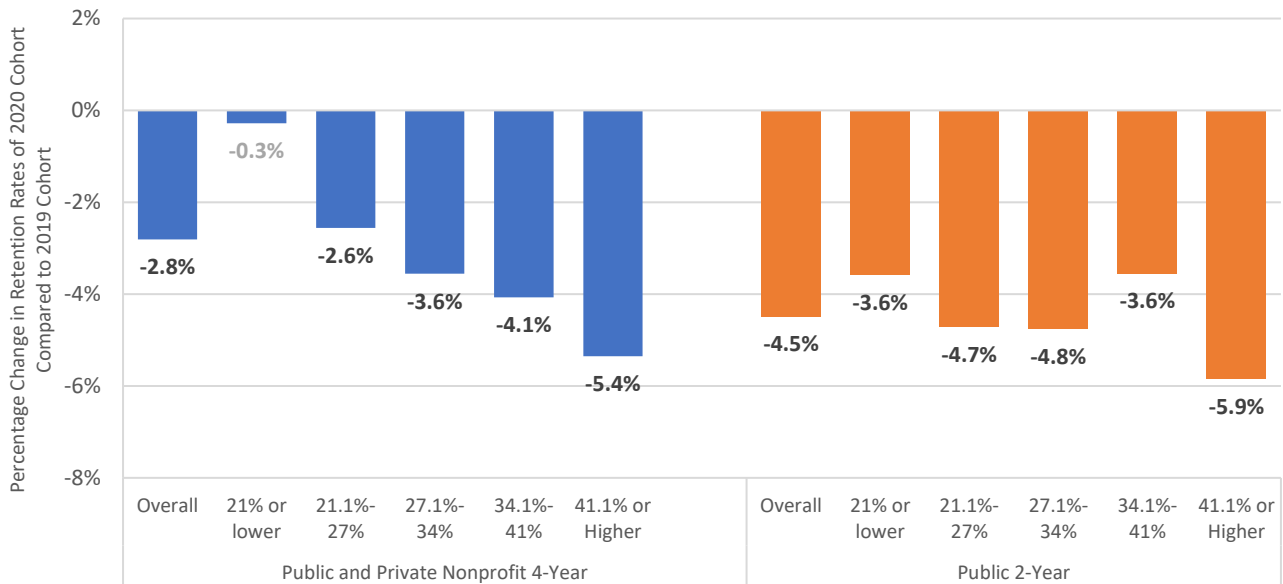
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 5% level. High school GPA is self-reported. Less than 0.2% of students with HSGPAs of B or below enrolled in schools with admission rate of less than 25%. These GPA groups are not shown in the dark gray panel.

- Compared to the 2019 cohort, among students attending the most selective colleges with high school GPAs of A- or higher, retention rates of students in the 2020 cohort increased by 1-2%.
- Compared to the 2019 cohort, retention rates of public four-year college students in the 2020 cohort declined the most for students with high school GPAs of B- or lower attending colleges that admitted at least 25% of applicants (online Appendix Table 5).
- Compared to the 2019 cohort, retention rates of private nonprofit four-year college students in the 2020 cohort declined the most among “B- or lower” students attending colleges that admitted at least 75% of applicants. The retention rates increased for all GPA groups at the colleges that admitted less than 25% of applicants (online Appendix Table 5).

Retention Rate Changes by Sector and Pell Share

Compared to the 2019 cohort, retention rates of four-year college students in the 2020 cohort declined the most among students enrolled at institutions with larger share of Pell recipients. This gradient is particularly sharp in the four-year sector.

Figure 37: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by Pell Share



Shares of Undergraduate Students Receiving Pell

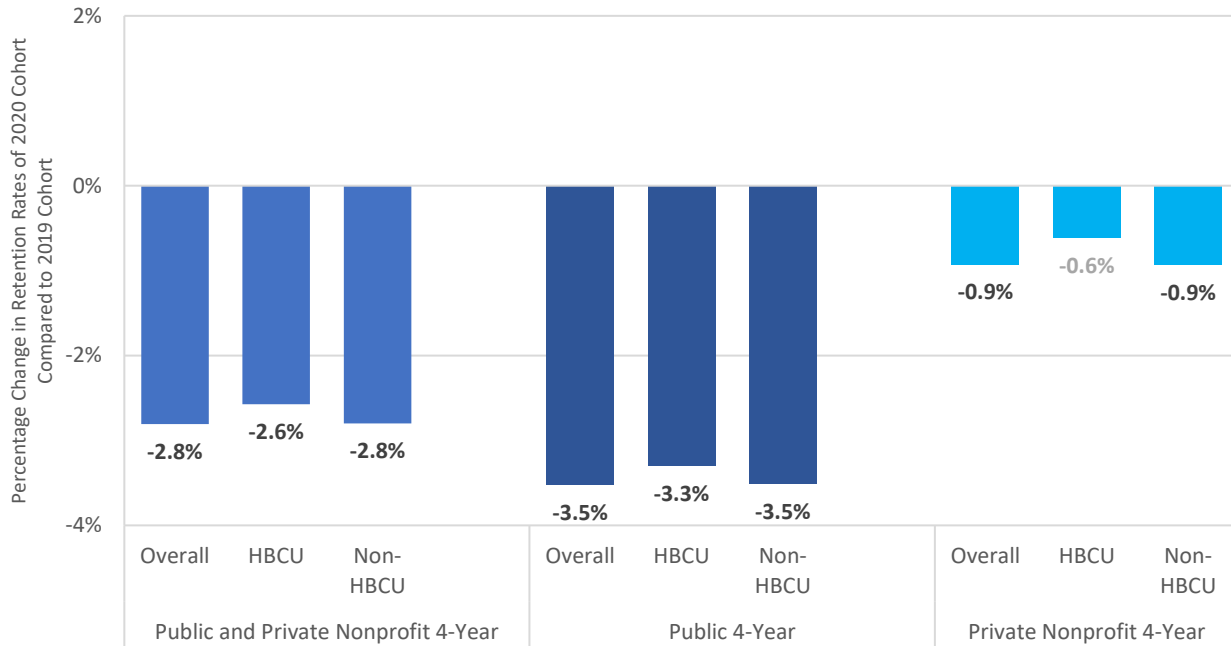
Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 10% level. Students are grouped into five quintiles.

- Compared to the 2019 cohort, retention rates of public two-year college students in the 2020 cohort declined across all categories, defined by the share of students receiving Pell grants.
- Compared to the 2019 cohort, retention rates of public four-year college students in the 2020 cohort declined more among students enrolled at institutions with larger share of Pell recipients (online Appendix Table 5).
- Compared to the 2019 cohort, retention rates of private nonprofit four-year college students in the 2020 cohort increased for those enrolled in colleges with the lowest share of students receiving Pell and declined for those enrolled in other colleges (online Appendix Table 5).

Retention Rate Changes by Sector and HBCU Status

Compared to the 2019 cohort, retention rates of students enrolled at four-year HBCU colleges declined by 2.6%; the decline was 2.8% at non-HBCU colleges.

Figure 38: Percentage Change in Regression-Adjusted Retention Rates of the 2020 Cohort Compared to the 2019 Cohort, by HBCU Status

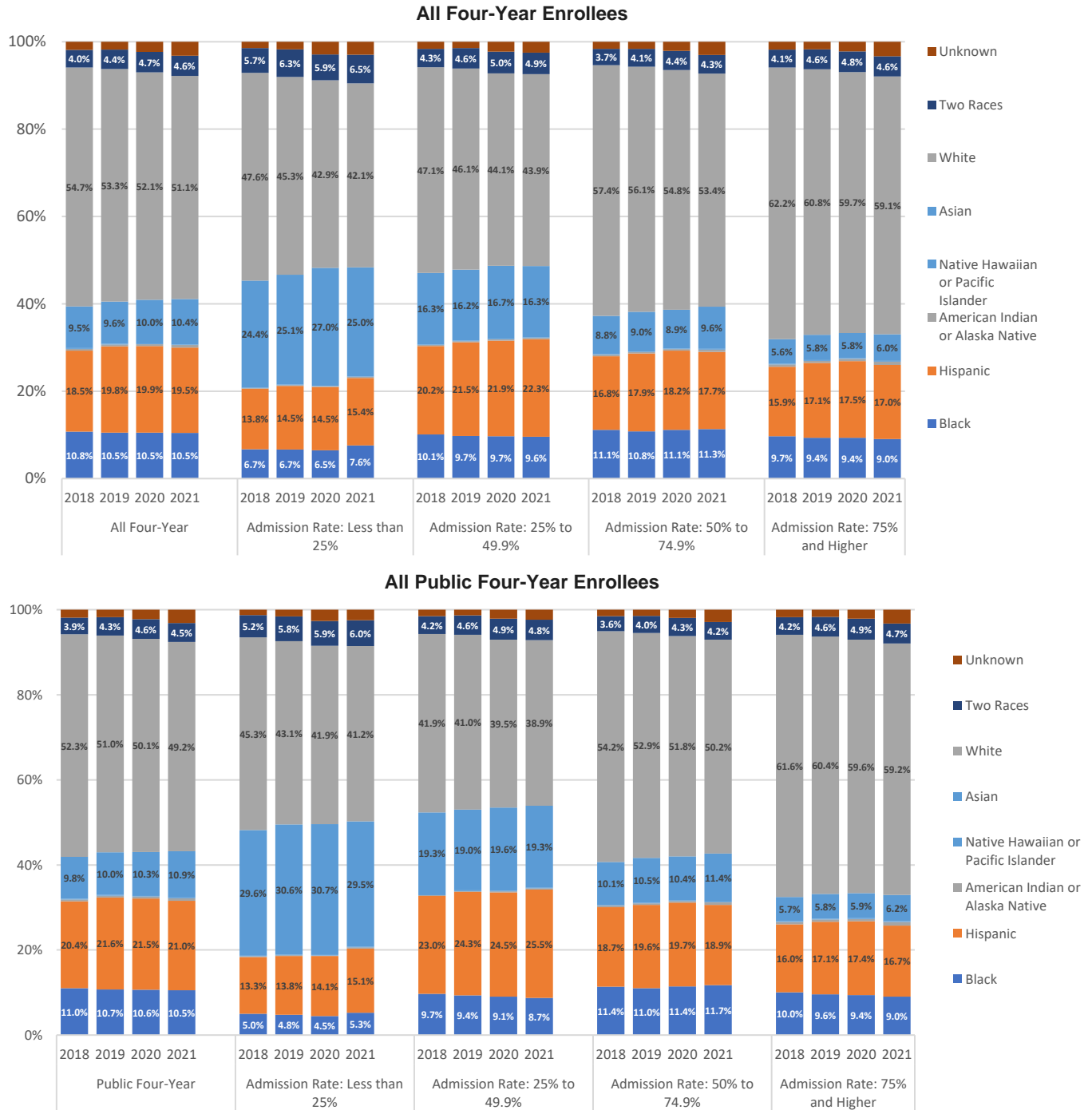


Note: Based on students who took the PSAT. Data labels in gray are not statistically significant at the 10% level.

- Compared to the 2019 cohort, retention rates of public four-year HBCU college students in the 2020 cohort declined by 3.3%; the decline was 3.5% at non-HBCU colleges.
- Compared to the 2019 cohort, retention rates of private nonprofit four-year HBCU college students in the 2020 cohort declined by a statistically insignificant 0.6%.
- There are 39 public four-year and 42 private non-profit four-year HBCU institutions.

Appendix

Figure A1: Percentage Distribution of Four-Year College Enrollees by College Admission Rate and Student Race/Ethnicity: PSAT Takers



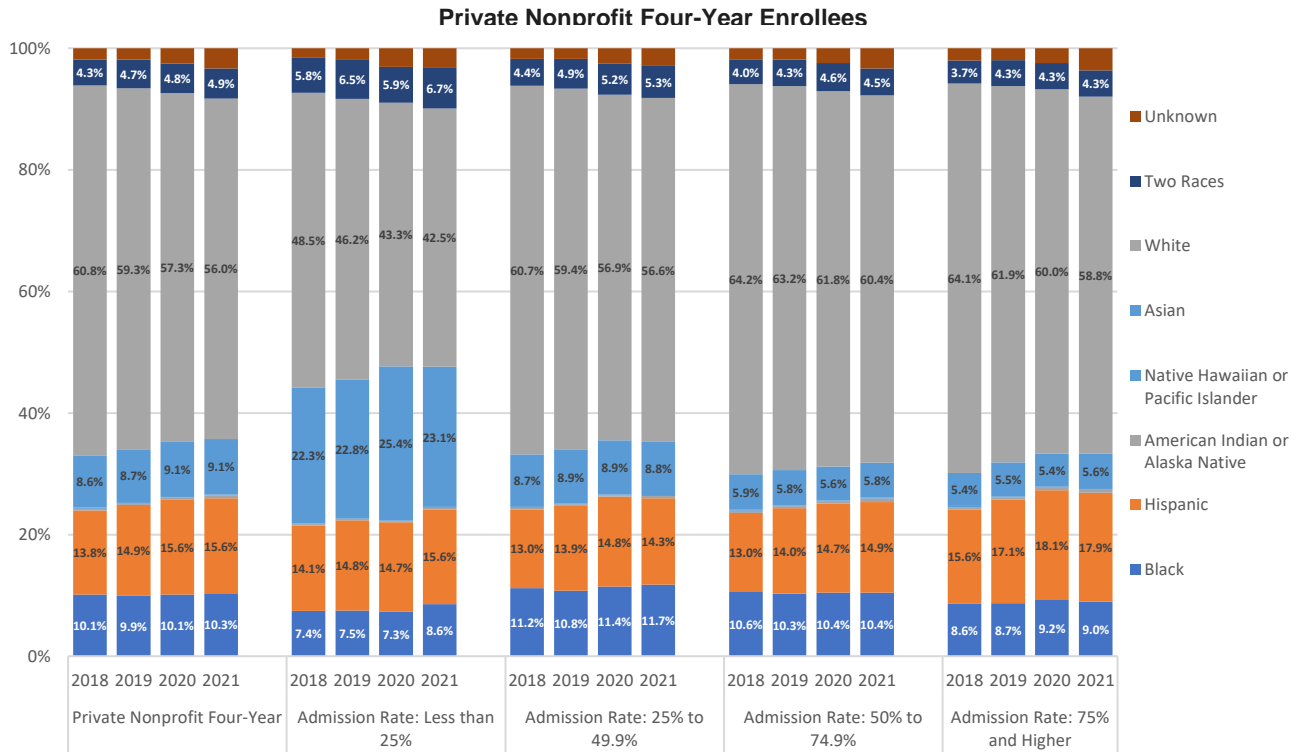
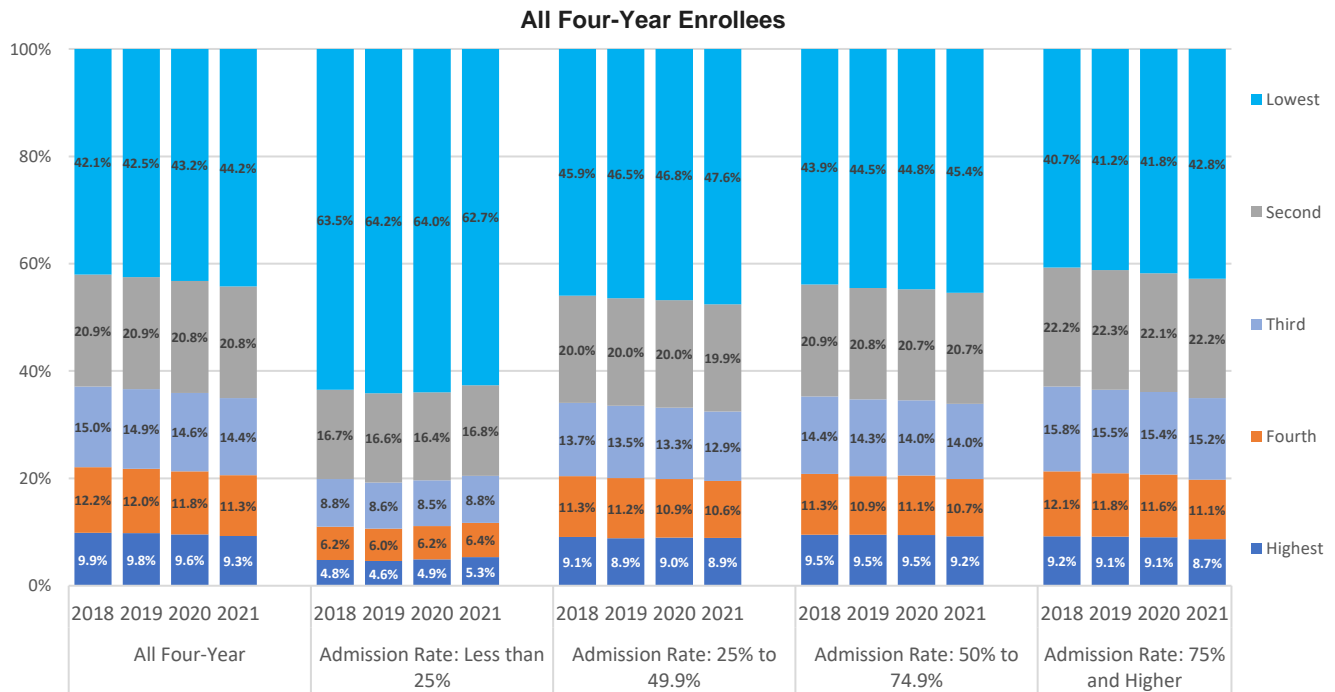
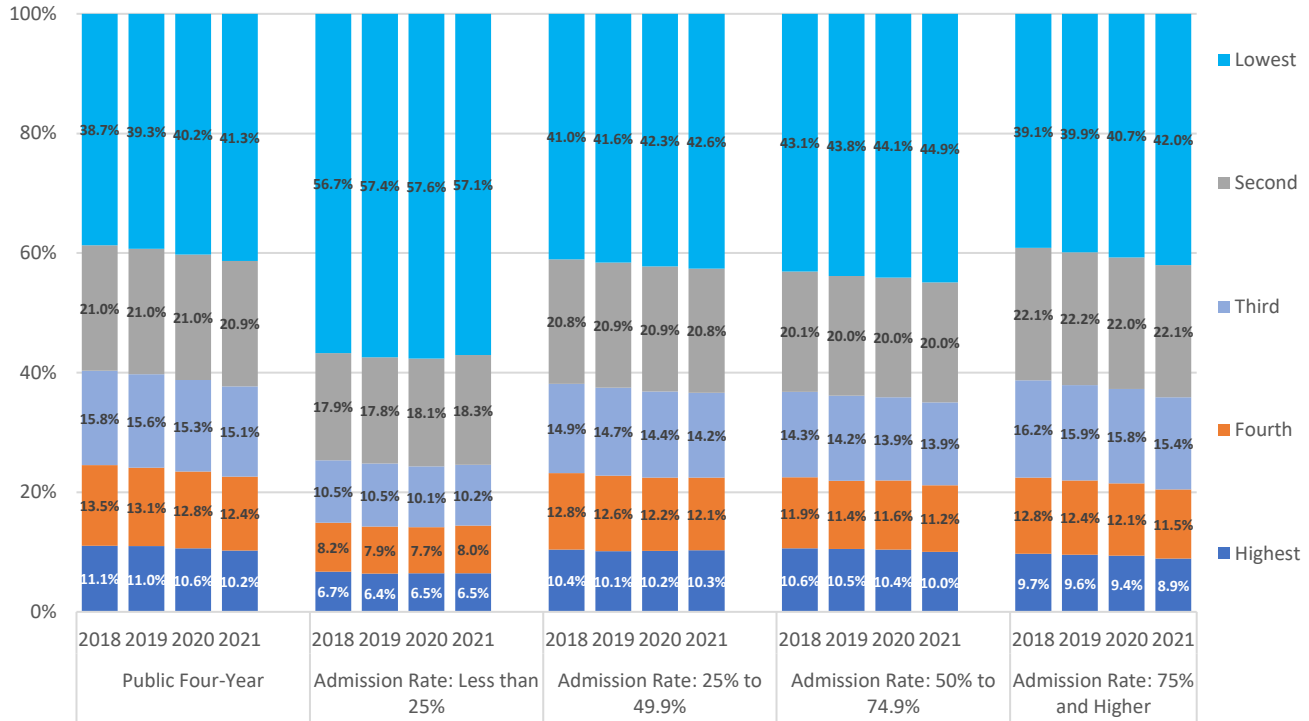


Figure A2: Percentage Distribution of Four-Year College Enrollees by College Admission Rate and Neighborhood Challenge Quintile: PSAT Takers

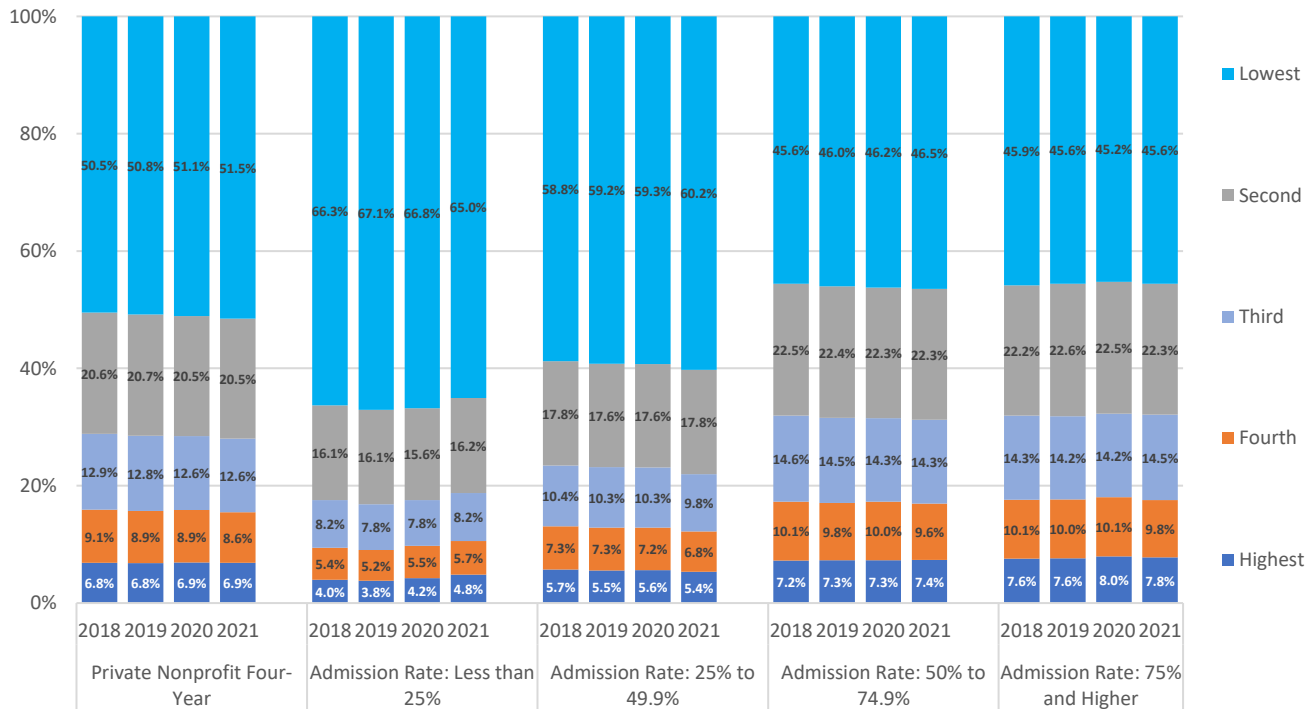


Note: The neighborhood challenge measure is comprised of six indicators at the census tract level including college attendance, household structure, median family income, housing stability, education level, and crime. Students living in highest challenge quintile neighborhoods have the greatest educational challenge (disadvantage). For more information about these measures, see: <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

Public Four-Year Enrollees



Private Nonprofit Four-Year Enrollees



Appendix Table 1: Learning, Testing, and Transition Experiences, 2017 to 2021 Cohorts

<p>Students who graduated from high school in...</p>	<p>Had learning, testing, and transition experiences including...</p>
<p>2017 or 2018</p>	<p>Full Pre-Pandemic Cohorts</p> <ul style="list-style-type: none"> • Immediate college enrollment in fall 2017 or fall 2018 • 2017 cohort took PSATs in 2014-2015 (sophomore year) or 2015-2016 (junior year); 2018 cohort took PSATs in 2015-2016 (sophomore year) or 2016-2017 (junior year) • There were no pandemic-related disruptions to testing, high school learning, or transition to college • College freshmen in 2017-2018 or 2018-2019 • SAT/ACT were required for college admission at most institutions
<p>2019</p>	<p>Pre-Pandemic in HS / Early-Pandemic in College Cohort</p> <ul style="list-style-type: none"> • Immediate college enrollment in fall 2019 • Took PSATs in 2016-2017 (sophomore year) or 2017-2018 (junior year) • There were no pandemic-related disruptions to testing or high school learning or their transition to college • Transition to college was pre-pandemic • College freshmen in 2019-2020, end of freshman year of college disrupted by the start of the pandemic (retention impacts were minimal; generous college grading begins) • SAT/ACT were required for college admission at most institutions • Took SATs/ACTs in spring 2018 (junior year) and fall 2018 (senior year); no disruptions
<p>2020</p>	<p>Mid-Pandemic Cohort</p> <ul style="list-style-type: none"> • Immediate college enrollment in fall 2020 • Took PSATs in 2017-2018 (sophomore year) or 2018-2019 (junior year) • End of their senior year of high school was disrupted by the start of the pandemic in March 2020; minimal learning disruptions • College freshmen in 2020-2021, transition to college potentially affected by the pandemic (enrollment impacts varied by student subgroup, college characteristics, and geography), freshman year of college was disrupted (generous college grading continues) • SAT/ACT were required for college admission at most institutions • Took SATs/ACTs in spring 2019 (junior year) and fall 2019 (senior year); no disruptions
<p>2021</p>	<p>Pandemic Cohort</p> <ul style="list-style-type: none"> • Immediate college enrollment in fall 2021 • Took PSATs in 2018-2019 (sophomore year) or 2019-2020 (junior year); scores reflect learning prior to the pandemic • Senior year may have been fully remote, hybrid, or in-person; potentially substantial learning disruptions • College freshmen in 2021-2022, transition to college potentially affected by the pandemic; freshman year largely normal • SAT/ACT were optional for college admission at most institutions • Took SATs/ACTs in spring 2020 (junior year) and fall 2020 (senior year); reduced testing opportunities; scores largely reflect learning prior to the pandemic

Appendix Table 2: Number of PSAT Assessment Takers In the Enrollment and Retention Models, 2018 to 2021 Cohorts

	PSAT Takers in the Enrollment Models			
	2018	2019	2020	2021
Total Number of PSAT Takers	2,682,346	2,746,492	2,734,298	2,684,349
Enrollment in Fall after High School (Number)				
Public or Private Nonprofit 4-Year	1,247,469	1,245,370	1,148,593	1,140,029
Public 4-Year	895,985	902,643	831,855	816,688
Private Nonprofit 4-Year	351,484	342,727	316,738	323,341
Public 2-Year	382,134	401,101	372,345	331,140
Not Enrolled or Enrolled in Other Colleges*	1,052,743	1,100,021	1,213,360	1,213,180
Enrollment in Fall after High School (Percent)				
Public or Private Nonprofit 4-Year	46.5%	45.3%	42.0%	42.5%
Public 4-Year	33.4%	32.9%	30.4%	30.4%
Private Nonprofit 4-Year	13.1%	12.5%	11.6%	12.0%
Public 2-Year	14.2%	14.6%	13.6%	12.3%
Not Enrolled or Enrolled in Other Colleges*	39.2%	40.1%	44.4%	45.2%
	PSAT Takers in the Retention Models			
	2018	2019	2020	2021
Total Number of PSAT Takers Enrolled in College in Fall after High School (Number)	1,629,033	1,645,379	1,520,214	N/A
Public or Private Nonprofit 4-Year	1,263,504	1,261,458	1,163,891	N/A
Public 4-Year	910,301	917,340	845,915	N/A
Private Nonprofit 4-Year	353,203	344,118	317,976	N/A
Public 2-Year	365,529	383,921	356,323	N/A
First-Year Retention Rates (Re-enrolled in the Same College One Year after High School)				
Public or Private Nonprofit 4-Year	80.5%	80.7%	78.5%	N/A
Public 4-Year	79.6%	80.3%	77.7%	N/A
Private Nonprofit 4-Year	82.8%	81.8%	80.9%	N/A
Public 2-Year	60.5%	58.9%	56.7%	N/A
First-Year Persistence Rates (Re-enrolled in Any College One Year after High School)				
Public or Private Nonprofit 4-Year	89.6%	88.8%	86.4%	N/A
Public 4-Year	88.6%	88.0%	85.5%	N/A
Private Nonprofit 4-Year	92.2%	90.6%	88.9%	N/A
Public 2-Year	70.6%	67.2%	66.7%	N/A

Appendix Table 3: Distribution of PSAT Takers in the Enrollment Models, 2018 to 2021 Cohorts

	PSAT Takers			
	2018	2019	2020	2021
Total Number of PSAT Takers	2,682,346	2,746,492	2,734,298	2,684,349
Race/Ethnicity				
American Indian or Alaska Native	0.8%	0.9%	1.0%	1.1%
Asian	6.8%	6.8%	6.9%	7.0%
Black/African American	12.6%	12.3%	11.9%	11.4%
Hispanic	26.1%	27.3%	27.7%	26.5%
Native Hawaiian or Other Pacific Islander	0.3%	0.3%	0.3%	0.3%
White	45.5%	44.1%	42.8%	42.4%
Two or More Races	3.9%	4.2%	4.3%	4.1%
Other	4.2%	4.2%	5.3%	7.2%
Highest Level of Parental Education				
High School Diploma or Less	24.1%	24.9%	24.3%	21.7%
Some College, No Degree	15.7%	15.6%	14.9%	13.9%
Associate Degree	7.6%	7.3%	7.0%	6.1%
Bachelor's Degree or Higher	44.7%	44.6%	44.7%	43.7%
Missing	7.8%	7.7%	9.1%	14.6%
Gender				
Female	50.8%	50.6%	50.6%	50.6%
Male	48.9%	49.0%	48.9%	49.0%
Other	0.4%	0.4%	0.4%	0.4%
High School Locale				
Urban	32.6%	32.5%	32.4%	32.1%
Suburban	43.2%	43.3%	43.6%	43.7%
Rural	22.3%	22.2%	22.0%	22.0%
Missing	2.0%	1.9%	2.0%	2.2%
High School GPA				
A+	5.4%	6.0%	6.6%	6.9%
A	16.8%	17.3%	18.0%	18.7%
A-	16.4%	16.8%	17.0%	17.0%
B+	16.1%	15.5%	15.0%	14.2%
B	15.6%	14.5%	13.4%	12.3%
B- or Lower	24.2%	23.9%	22.9%	20.0%
Missing	5.6%	6.0%	7.1%	11.0%

Appendix Table 3, Continued	PSAT Takers			
	2018	2019	2020	2021
PSAT® Score				
760 or Lower	15.4%	16.8%	18.4%	18.7%
770 to 880	22.1%	22.2%	21.1%	21.0%
890 to 990	20.2%	19.7%	19.3%	19.8%
1000 to 1120	21.0%	20.1%	19.8%	20.2%
1130 to 1520	21.3%	21.3%	21.3%	20.2%
Neighborhood Challenge Quintile (Larger = More Disadvantaged)				
Lowest (1 to 20 Percentile)	27.9%	27.5%	27.9%	27.6%
Second (21 to 40 Percentile)	17.9%	17.7%	17.8%	17.3%
Third (41 to 60 Percentile)	15.2%	15.1%	14.9%	14.5%
Fourth (61 to 80 Percentile)	14.6%	14.5%	14.2%	13.5%
Highest (81 to 100 Percentile)	14.9%	14.8%	14.5%	13.7%
Missing	9.5%	10.3%	10.6%	13.4%
High School Type				
Public	89.5%	89.8%	90.0%	89.1%
Private	10.1%	9.7%	9.5%	9.6%
Other	0.5%	0.5%	0.5%	1.3%
Share of High School Students Eligible for Free and Reduced Priced Lunch (FRPL), Public High Schools				
1% to 20%	16.6%	16.5%	16.8%	17.2%
21% to 40%	22.9%	22.9%	22.9%	22.9%
41% to 60%	20.0%	20.4%	20.4%	20.4%
61% to 80%	15.0%	15.3%	15.2%	14.7%
81% to 100%	10.6%	10.5%	10.6%	10.2%
Missing	14.9%	14.4%	14.2%	14.5%

Data and Methodology

Analyses in this report are based on a rich data set from College Board, National Student Clearinghouse (NSC), and the U.S. Department of Education. Enrollment analyses utilize data from the 2018 to 2021 high school graduation cohorts; retention analyses (re-enrolling at the *same* postsecondary institution) and persistence analyses (re-enrolling at *any* postsecondary institution) utilize data from the 2017 to 2020 high school graduation cohorts. Additional data are sourced the Department of Education and the Bureau of Labor Statistics.

The analytic sample is based on students with U.S. mailing addresses who took the PSAT®. Appendix Table 2 and Table 3 provide the number and distribution of students included in the sample for each of these cohorts. The total number of students included in the enrollment analytic sample is 2.68 million in 2018, 2.75 million in 2019, 2.73 million in 2020, and 2.68 million in 2021. This sample of U.S. high school students covers a stable 67% to 68% of all 12th graders during this time period.¹¹ The stability in the sample and the fact that PSAT taking was largely unaffected by the pandemic allows the impacts of the pandemic on enrollment and retention rates to be identified overall and for subgroups defined by student demographics, academic preparation, high school attributes, college characteristics, and geography.¹²

We provide descriptive data on changes in both college enrollment and retention/ persistence rates, as in prior research (National Student Clearinghouse Research Center 2021). For example, Appendix Table 2 shows that 42.0% of the 2020 high school graduating cohort enrolled in a public four-year or private nonprofit four-year college, compared to 45.3% in 2019, implying an unadjusted one-year change in college enrollment rates of 3.3 percentage points or 7.3%. This unadjusted change likely overstates the early effect of the pandemic on four-year college enrollment rates given the downward pre-pandemic trend in college enrollment visible in Figure 1.

The bulk of this report relies on fitting statistical models to the data to adjust for trends in student demographics and college-going behavior unrelated to the pandemic. Ultimately, the enrollment models isolate the estimated change in college enrollment for a student from the 2021 high school graduation cohort relative to an otherwise similar student from the 2020 high school graduation cohort.

Equation (1) specifies the linear probability regression model used to isolate the changes in college enrollment associated with covid-19.¹³

$$(1) \text{Enrollment}_i = \alpha_1 + \beta_1 \text{Cohort2021}_i + X_i \Gamma + \epsilon_i$$

Enrollment_i denotes whether or not student *i* enrolled in college in the fall after finishing high school. Vector *X_i* includes a rich set of controls: an indicator for whether a student was in the 2018 cohort or the 2019 cohort (*Cohort2020* is the omitted variable), measures of academic achievement (PSAT scores), student demographics (gender, race, parental education), neighborhood attributes, high school attributes (private/public, free/reduced lunch eligibility percentage), and indicators for

¹¹ Coverage rates are calculated by dividing the number of College Board assessment takers in each cohort by the number of 12th graders reported in *Knocking at the College Door* from Western Interstate Commission for Higher Education (Bransenger et al., 2020).

¹² See Appendix Table 1 for more detail on all cohorts of students utilized in this report and the timing of when the covid-19 pandemic did and did not disrupt their learning, testing, transition to college, and freshmen experience.

¹³ Logistic regression models yield similar results, so we rely on the OLS estimates because they are more straightforward to interpret directly.

geography-specific elements including students' home state. Standard errors are clustered at the state level.

The parameter of interest in equation (1) is β_1 on the *Cohort 2021* indicator, which captures the change in the likelihood of enrollment for a student in the 2021 cohort relative to the 2020 cohort all else constant. We calculate the percentage change in the 2021 cohort enrollment compared to the 2020 cohort by dividing the percentage point coefficient estimate, β_1 , by the 2020 mean enrollment rate. We separately fit equation (1) for student subgroups defined by sociodemographic data and academic preparation, and report these regression-adjusted percentage changes in Section 2. Enrollment regression coefficients and associated standard errors from equation (1) are reported in online Appendix Table 4.

Similarly, we use a linear probability regression model to estimate how college retention and persistence changed for the 2020 high school cohort relative to the 2019 cohort, controlling for the same set of variables as in equation (1).

$$(2) \text{Retention}_i = \alpha_2 + \beta_2 \text{Cohort2020}_i + X_i\Gamma + \epsilon_i$$

$$(3) \text{Persistence}_i = \alpha_3 + \beta_3 \text{Cohort2020}_i + X_i\Gamma + \epsilon_i$$

Retention_i denotes whether or not student *i* re-enrolled in the same institution in the fall after their first year in college. *Persistence_i* denotes whether or not student *i* re-enrolled in any institution in the fall after their first year in college. The controls variables in equations (2) and (3) are the same as in vector X_i in equation (1). A *Cohort2020* indicator variable in these regressions focuses the estimates on students who were in their first year in college during the 2020-21 academic year. We calculate the percentage change in the 2020 cohort retention/persistence compared to the 2019 cohort by again dividing the appropriate coefficient estimate, β_2 or β_3 , by the 2019 mean retention rate for each regression. We report these percentage changes in Section 3, focusing primarily on retention rate changes, which are generally similar to persistence rate changes. Retention regression coefficients and associated standard errors from equation (2) are in online Appendix Table 5.

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