

Access to Colleges and Universities in Maryland: Who Enrolls and Who Persists?

Charlotte E. Healy

June 2019

For over half a century, the increasing diversity of the college age population has challenged educators, researchers, and policymakers to think differently about access to higher education. In 1960, only 45% of high school graduates enrolled in a higher education institution immediately after high school.¹ In 1988, the William T. Grant Foundation published a report illuminating the needs of “the forgotten half,” comprised of students who did not attend college and therefore struggled to successfully transition into adulthood.² In recent decades, federal and state governments have enacted reforms focused on encouraging more students to enroll in college under the educational goal, “college for all.” Nationwide, policies including the expansion and addition of scholarship, grant, and loan programs and open-access colleges have been successful at increasing college enrollment.³ By 2012, about 67% of high school graduates immediately enrolled in college, and 90% on-time high school graduates enrolled in college within eight years.⁴ Today, access to higher education is less of a barrier than it once was.

While access to post-secondary education improved, the “forgotten half” has evolved from students who are not attending college to students who are not completing college.⁵ Recent data shows that 40% of students at four-year institutions and 70% of students at two-year institutions are not graduating within six or three years, respectively.⁶ In *Bridging the Gaps: College Pathways to Career Success*, Rosenbaum, Ahearn, and Rosenbaum (2017) argued that the enormous gains in enrollment in college over the past decades are limited when many of the students do not attain a degree or certificate.

As we re-conceptualize the composition and needs of the “forgotten half,” our definition of access to higher education has evolved. Opportunities and supports to enroll in higher education continue to be a critical component of access. However, another critical component to access is persistence, that is, the continued enrollment, transfer to another institution, or completion of an education credential at any higher education institution. Using this conceptualization of access, this research brief describes trends in access

¹ U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics (2017). *Recent high school completers and their enrollment in college, by sex and level of institution: 1960 through 2017*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_302.10.asp

² Rosenbaum, J., Ahearn, C., Becker, K. & Rosenbaum, J. (2015). *The new forgotten half and research directions to support them summary and key findings*. New York: William T. Grant Foundation.

³ Rosenbaum, J., Ahearn, C., & Rosenbaum, J. (2017). *Bridging the gaps: College pathways to career success*. New York, NY: Russell Sage Foundation,

⁴ Ibid

⁵ Ibid

⁶ U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics (2017). *Recent high school completers and their enrollment in college, by sex and level of institution: 1960 through 2017*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_302.10.asp

to higher education in Maryland, including how enrollment and persistence varies by race/ethnicity, social-economic status, and institution.

Methodology

We use data from the Maryland Longitudinal Data System Center (MLDSC)⁷ and Maryland Higher Education Commission (MHEC)^{8,9,10} for 2008 to 2018 to examine enrollment and persistence in higher education. The MLDSC includes data on post-secondary enrollment by institution and county. The MHEC provides data on enrollment, remediation, retention, transfer, and graduation. We use descriptive statistics to describe trends in the demographic composition of public colleges and universities in Maryland. Our data describes undergraduate enrollment, except for four-year institutions, which includes graduate student enrollment. Differences in enrollment and persistence by student characteristics are presented as *rates*. The rates describe the percentages of students from a specific subgroup who enrolled in college within two years of graduating from high school, transferred and/or graduated from a community college within 4 years, and returned to college in the subsequent year and/or graduated from a four-year public institution within 6 years. With these measures, we show the probability of a specific subgroup of students enrolling and persisting in higher education. For student characteristics, we use five racial/ethnic categories: Asian, Hispanic, Black, White, and other.¹¹ For measures of income we used Free and Reduced Meals (FARMs) as an indicator of high school students from low-income families and Pell Grant award as an indicator of financial need in college.

Our analysis includes data for 13 colleges and universities that make up Maryland's public higher education system. These institutions offer both 4-year and graduate programs. The University of Maryland Baltimore is comprised of professional schools (e.g., law, medicine, social work, etc.) and the University of Maryland University College (UMUC) focuses on distance learning and online education. The analysis also includes data for the 16 community colleges in Maryland. Community colleges are regional, and primarily serve students from the local community.

⁷ Maryland Longitudinal Data System Center (2018). *Dashboards*. Retrieved from <https://mldscenter.maryland.gov/Dashboards>

⁸ Maryland Higher Education Commission (2018). *2018 Data Book*. Retrieved from <https://mhec.state.md.us/publications/Documents/Research/AnnualPublications/2018DataBook.pdf>

⁹ Maryland Higher Education Commission (2019). *2019 Data Book*. Retrieved from <https://mhec.state.md.us/publications/Documents/Research/AnnualPublications/2019DataBook.pdf>

¹⁰ Maryland Higher Education Commission (2018). *Opening Fall Enrollment*. Retrieved from <https://mhec.state.md.us/publications/Documents/Research/AnnualReports/2018OpeningFallEnrollment.pdf>

¹¹ Other includes American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, two or more races, and foreign or non-resident alien students.

Access to Higher Education: Who Enrolls and Where

Post-Secondary Enrollment Rates

In 2018 71% of Maryland students enrolled in higher education within two years of high school graduation. However, the post-secondary enrollment rate of Maryland high school graduates varied by race/ethnicity, socio-economic status, and county. As shown on Figure 1, the post-secondary enrollment rate ranged from 62% for Hispanic students to 91% for Asian students, a range of 29 percentage points. The higher education enrollment rate was 66% for African American students, 73% for students of two or more races, 75% for White students, and 83% for American Indian or Alaska Native students. These differences persist as the number of years of possible enrollment increase. Post-secondary enrollment rates also differed by the socioeconomic status of high school students, with 56% of FARMs students, compared to 70% of non-FARMs students enrolled in a higher education institution within two years of graduating from high school. However, the difference between FARMs and non-FARMs students decreased as the number of years of possible enrollment increased.

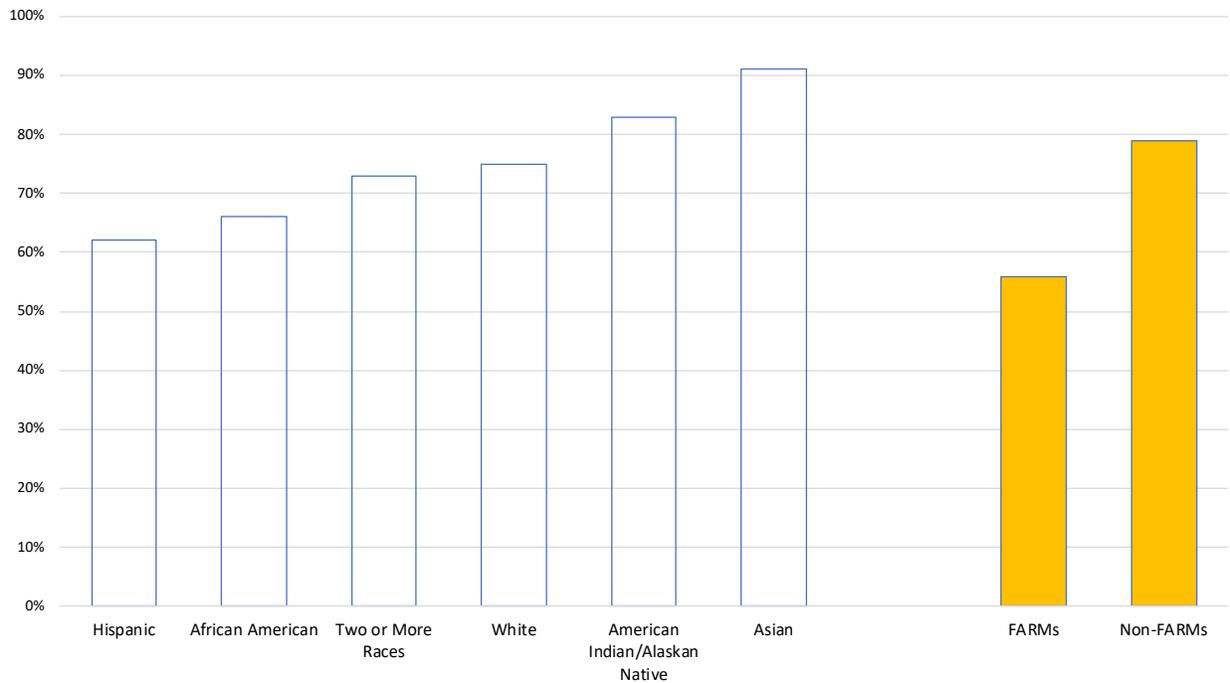


Figure 1: Rate of post-secondary enrollment in 2018 within two years of high school graduation by race/ethnicity and FARMs, Maryland

Note: Post-secondary data from MLDSC included six racial categories.

There are also disparities in college enrollment rates between school districts. College enrollment within two years for students graduating from the public schools in 2016 ranged from 50% in Dorchester County to 89% in Howard County, a difference of 39 percentage points (see Figure 2). These disparities have persisted over the past decade and as the number of years of possible enrollment increased (see Appendix A). For all of the graduating cohorts between 2008-2017, Howard County had the highest post-secondary enrollment rate. Kent County had the lowest rate for 6 cohorts, and Dorchester had the lowest rate for 3 cohorts.

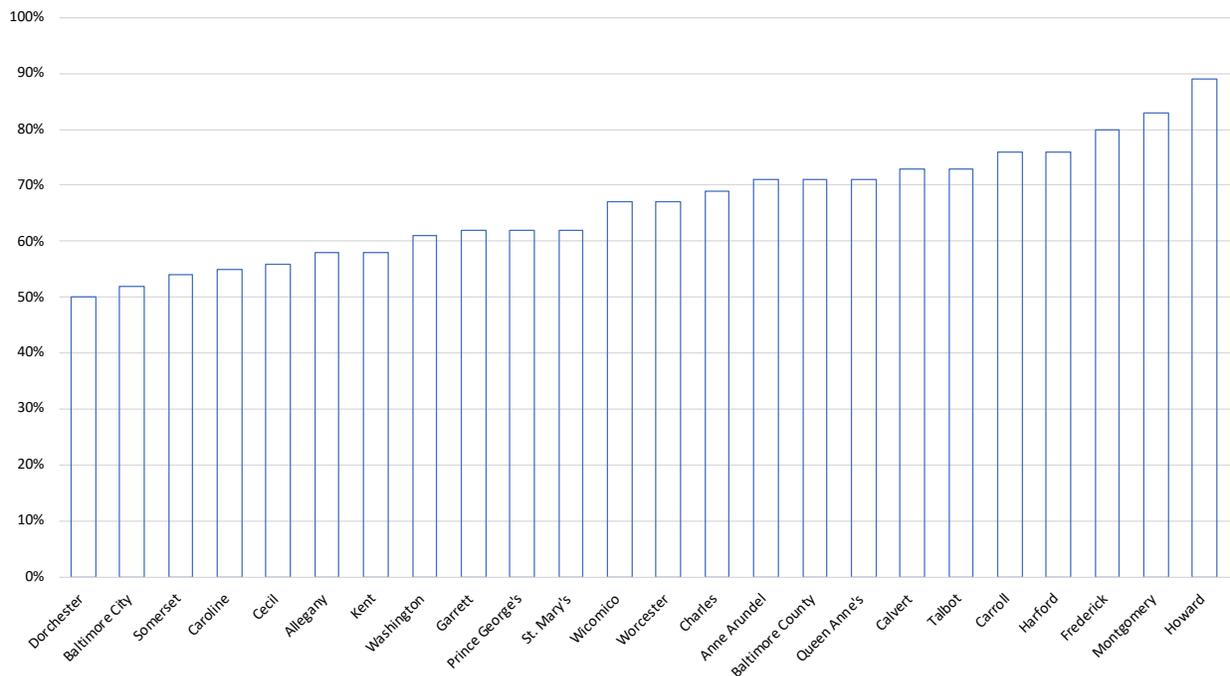


Figure 2: Rate of post-secondary enrollment in 2018 within two years of high school graduation by county of residence, Maryland

Trends in Enrollment and Composition

In 2018, community colleges and four-year public institutions enrolled a total of 301,415 students (see Figure 3). Over the past six years, the total enrollment ranged from 301,428 in 2013 and 301,415 in 2018, which indicates little change in the total number of students going to college. There has been a shift in where students are going to college. Community colleges enrollment declined for eight consecutive years, from 148,704 in 2011 to 116,021 in 2018, which is a 22% decrease. In contrast, enrollment at four-year public institutions increased over the last six years, with a 14% increase from 2013, which suggests that students may be choosing to enroll in four-year colleges rather than beginning their post-secondary education at community colleges.

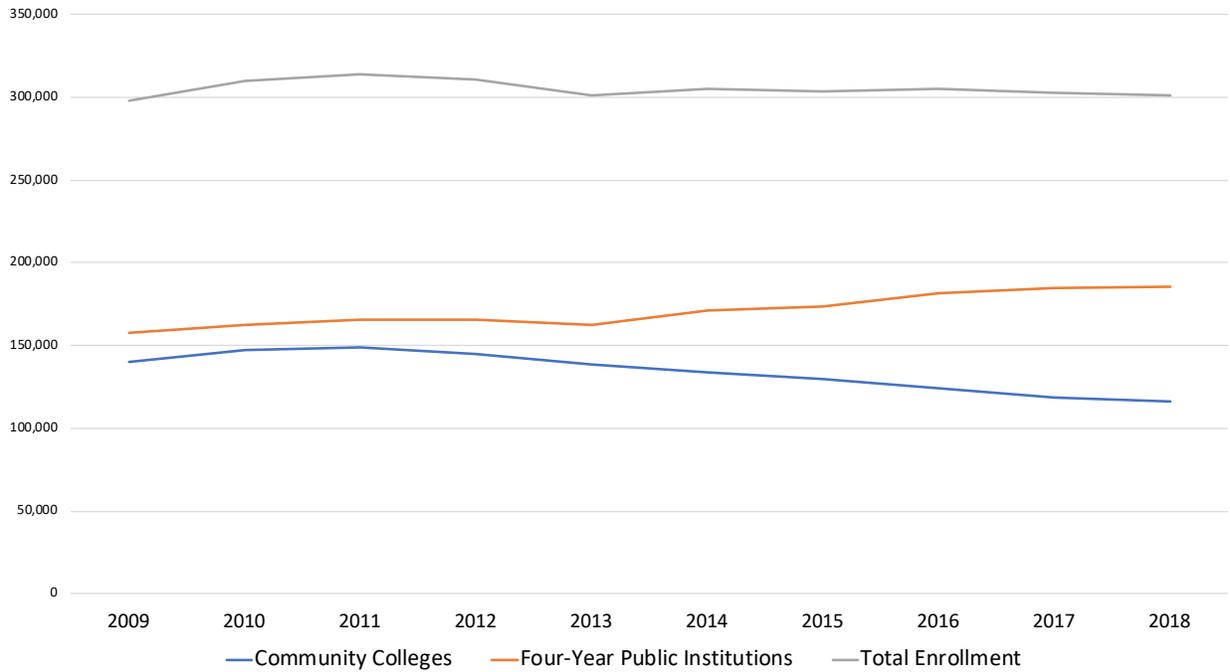


Figure 3: Trends in higher enrollment totals from 2009-2018, Maryland

Over the past decade, the racial and ethnic composition of higher education enrollment at Maryland institutions has become slightly more diverse. As displayed in Figure 4, the largest changes were in the percentage of White students, which declined from 51.5% in 2008 to 43.4% in 2017, and in Hispanic students, which has more than doubled from 4.3% of the total undergraduate enrollment in 2008 to 9.7% in 2017. The share of the “other” race category also increased, while the African American and Asian share of enrollment remained relatively constant.

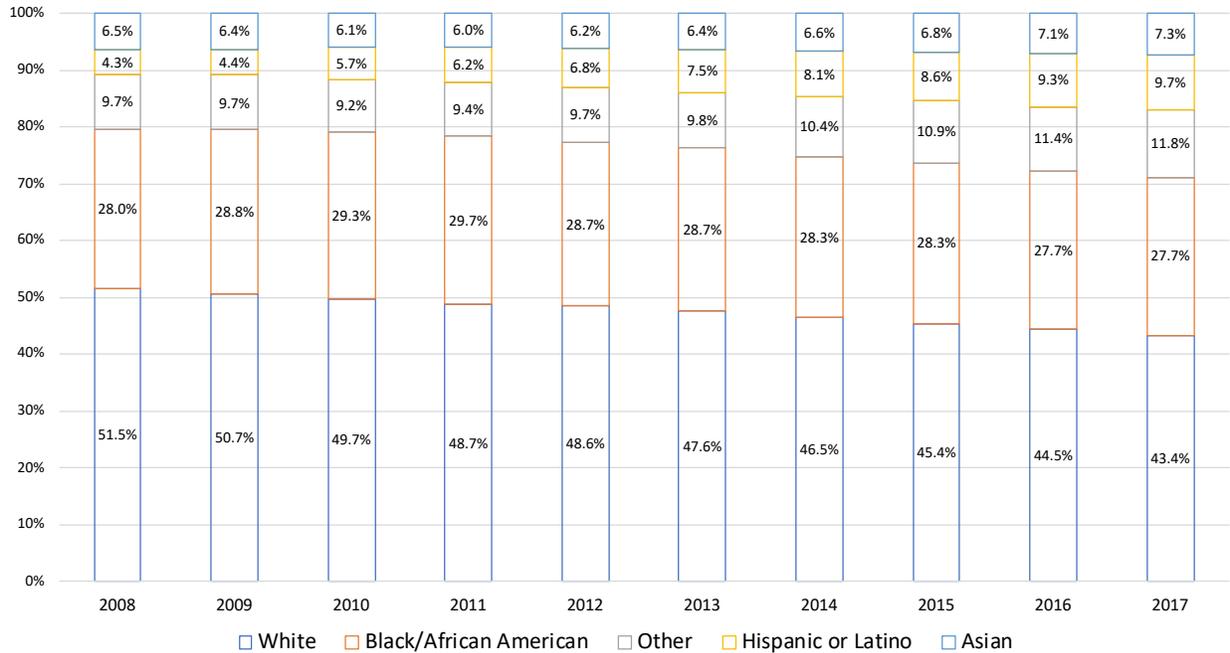


Figure 4: Trends in racial/ethnic composition of higher enrollment from 2008-2017, Maryland

There is little variation in the racial/ethnic composition of students enrolled in Maryland community colleges and those enrolled in four-year public institutions, as shown on Figure 5. White students represent the largest share of students enrolled in both four-year institutions and community colleges, at 44% and 43% respectively. African American students comprised 27.1% of students at four-year public colleges, compared to 30.4% of students at community colleges. Similarly, Hispanic students comprised 10.1% of the students in Maryland community colleges compared to 7.8% of the students enrolled in four-year public institutions. In contrast to African American and Hispanic students, Asian students and students in the “other” racial category comprised slightly larger portions of four-year institutions than of community colleges.

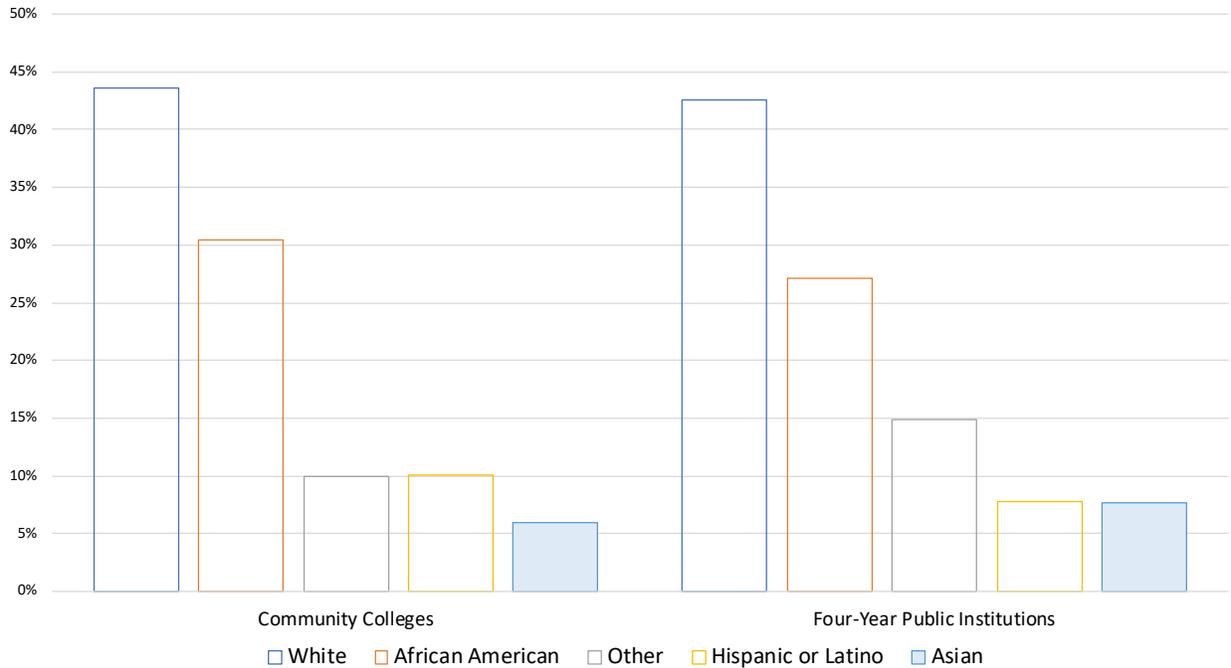


Figure 5: Racial/ethnic composition of higher education enrollment by institution type in 2016, Maryland

While there is little variation in the racial/ethnic composition by type of institution (i.e., community college versus four-year college), there is considerable variation across institutions, as shown in Figures 6 and 7. In Maryland’s community colleges, White students comprised more than 50% of the student population at 11 out of 16 community colleges and 70% in five of those colleges (see Figure 6). In contrast, White students comprised 5% of Prince George’s Community College and 8% of Baltimore City Community College. African American students were the majority group at two community colleges—Prince George’s Community College (71%) and Baltimore City Community College (73%). Howard County Community College and Montgomery County Community College enrolled markedly higher percentages of Asian students than other community colleges. Hispanic students comprised relatively larger percentages of the student population at Howard County Community College, Montgomery County Community College, Fredrick County Community College, and Prince George’s Community College. Since community colleges are regional—there is a community college available to students in every school district—they tend to attract students from the county or region where they are located. Thus, the racial/ethnic composition of community colleges most likely reflects the composition of the population of the county or region where the college is located.

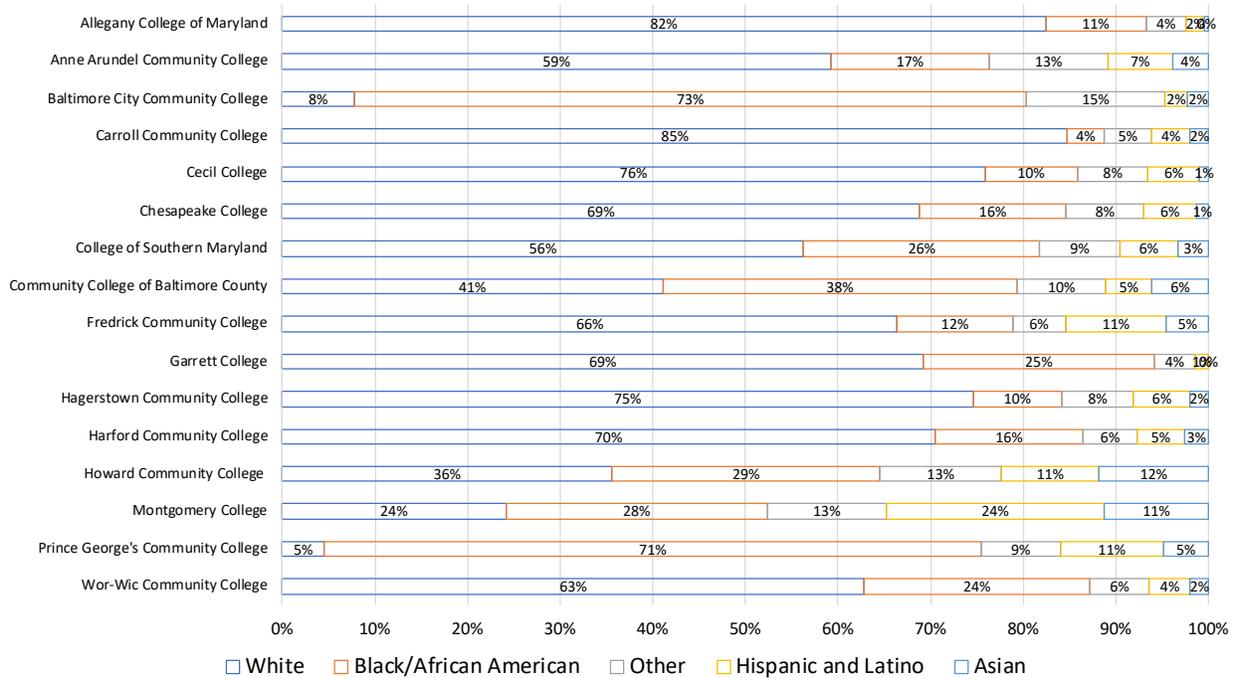


Figure 6: Racial/ethnic composition of community college enrollment by institution in 2016, Maryland

Examining the racial/ethnic composition of four-year institutions shows that African American students comprised the majority of students enrolled at Maryland’s four Historically Black Colleges and Universities (HBCUs): Bowie State University, Coppin State University, Morgan State University, and the University of Maryland, Eastern Shore. Enrollment of African American students at HBCUs ranged from 70.1% at University of Maryland, Eastern Shore to 83.1% at Bowie State (see Figure 7). In four-year public institutions that are not HBCUs, African American students comprised a smaller share of the enrollment. At the University of Maryland, College Park, 11.5% of students are African American, the second lowest percentage among the 4-year public institutions. Among non-HBCUs, the University of Baltimore, which is located in Baltimore City, had the largest share of African American students (42%).

White students make up more than 50% of the population in 5 of the 9 four-year public institutions in Maryland that are not HBCUs. Approximately 70% of students enrolled in Salisbury University and St. Mary’s College of Maryland were White students. Percentages of White students were also majorities at Towson University (59%), Frostburg State University (55%), and University of Maryland, Baltimore (51%). The share of Asian students at three Maryland four-year institutions was larger than the 7.7% average across all four-year institutions. In 2016, 18.7% of students at University of Maryland, Baltimore County were Asian, followed by 15.9% at the University of Maryland, Baltimore, and 13.7% at the University of Maryland, College Park.

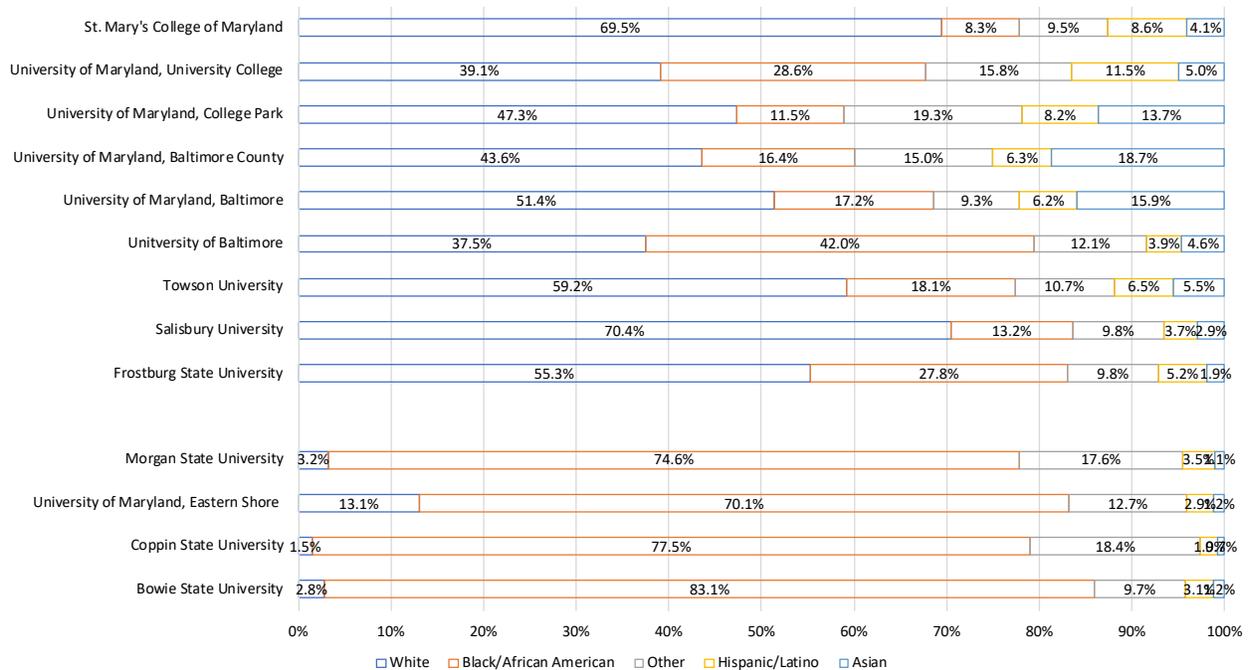


Figure 7: Racial/ethnic composition of four-year public institution by institution in 2016, Maryland

The socio-economic composition of Maryland higher education also differs by institution. We used receipt of a Pell Grant award as a measure of socio-economic status since grants are awarded to students based on financial need. In 2016, 34% of community college students and 28% of students at four-year institutions were Pell Grant recipients. As shown in Figure 8, the percentage of Pell Grant recipients at four-year institution varied from 19% to 57%, with HBCUs enrolling much higher proportion of Pell Grant recipients than other four-year public institutions. The average percentage of Pell Grant recipients was 53% at HBCUs compared to 28% at other institutions.

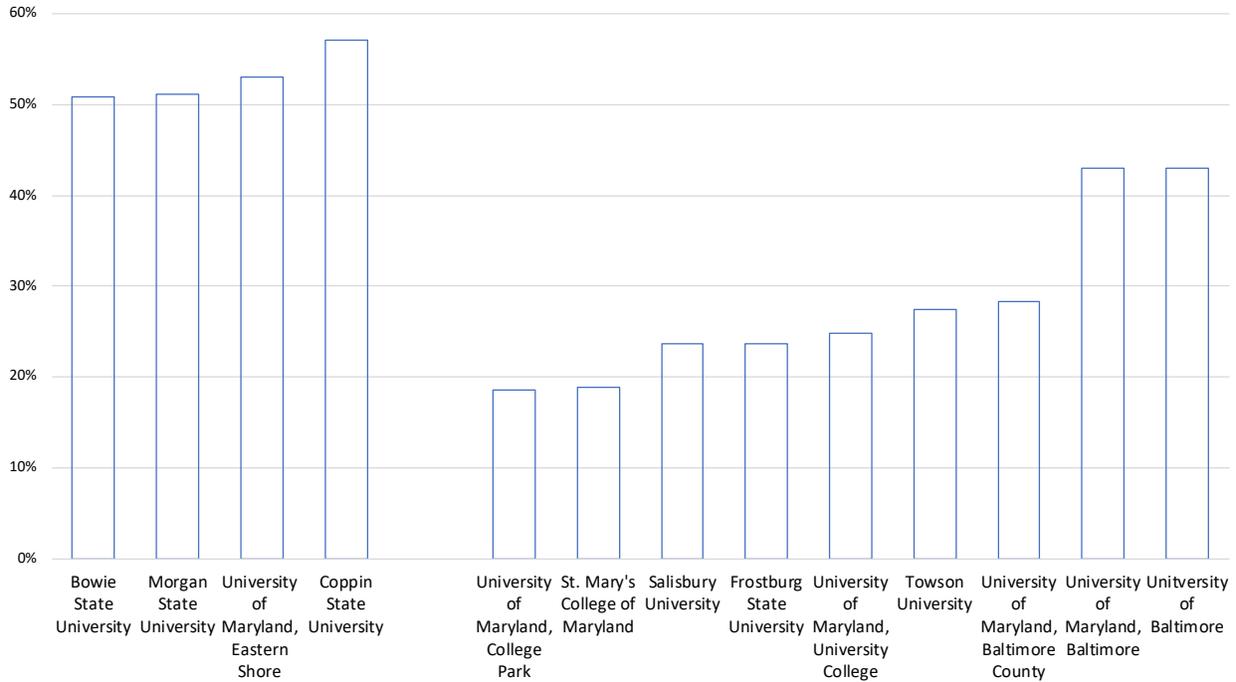


Figure 8: Percentage of Pell Grant recipients by four-year public institution in 2016, Maryland

Persistence in Higher Education

Transfer and Graduation Rates at Community Colleges

In Maryland, only a minority of community college students who first enrolled in 2012 transferred or graduated by 2016, as shown in Figure 9. The average transfer rate within four years for all students was 26%. The transfer rates for African American students and Pell Grant recipients were lower, both at approximately 20%. While the average graduation rate from community college within four years was 10%, the graduation rate for Pell Grant recipients was 8% and for African American students, it was 5%.

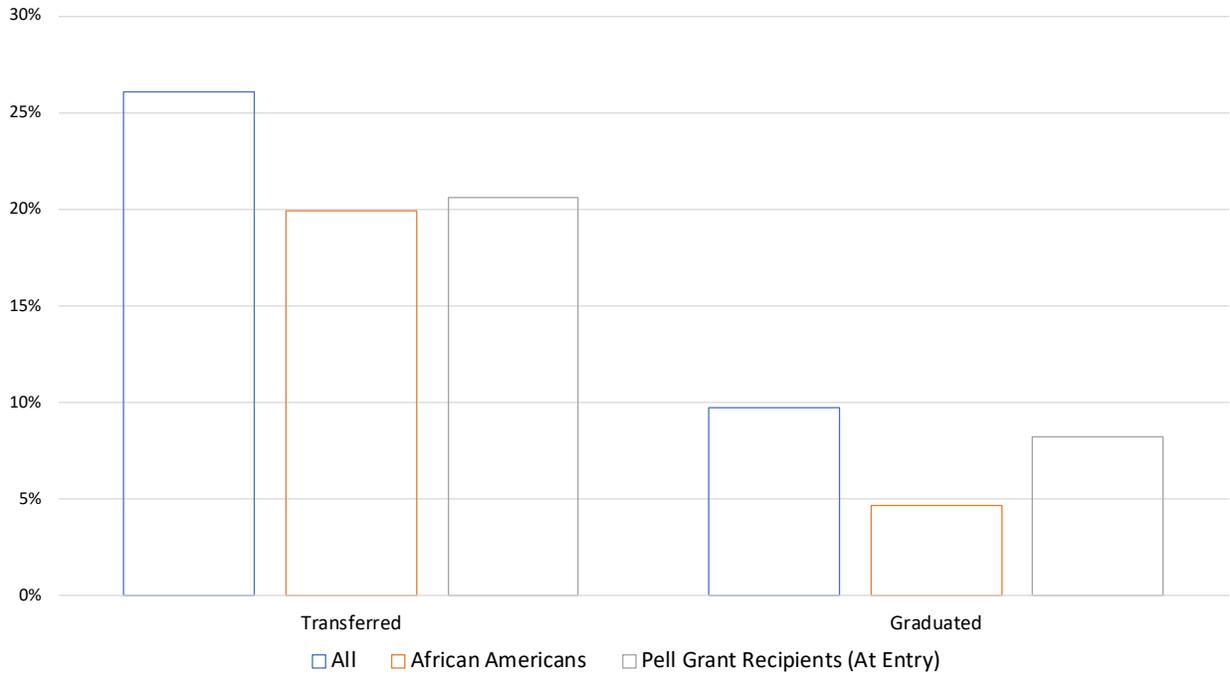


Figure 9: Community college transfer and graduation rates in 2016 by characteristics of interest, Maryland

Note: Transfer and graduation rates are four-year rates for the 2012 entry cohort. Transfer rates represent the percentage of students from a specific subgroup who enrolled at a four-year institution within four years of leaving a community college with or without receiving a degree or certificate. Graduation rates represent the percentage of students from a specific subgroup who earned an associate degree or a certificate within four years and did not transfer.

Transfer rates for community college students varied by institution, with the transfer rate for African American and Pell Grant recipients lower than that of all students at most institutions. Among community colleges, the transfer rate for all students ranged from 9% to 34% (see Figure 10). Among African American the transfer rate ranged from 5% to 30% and from 6% to 30% for Pell Grant recipients.

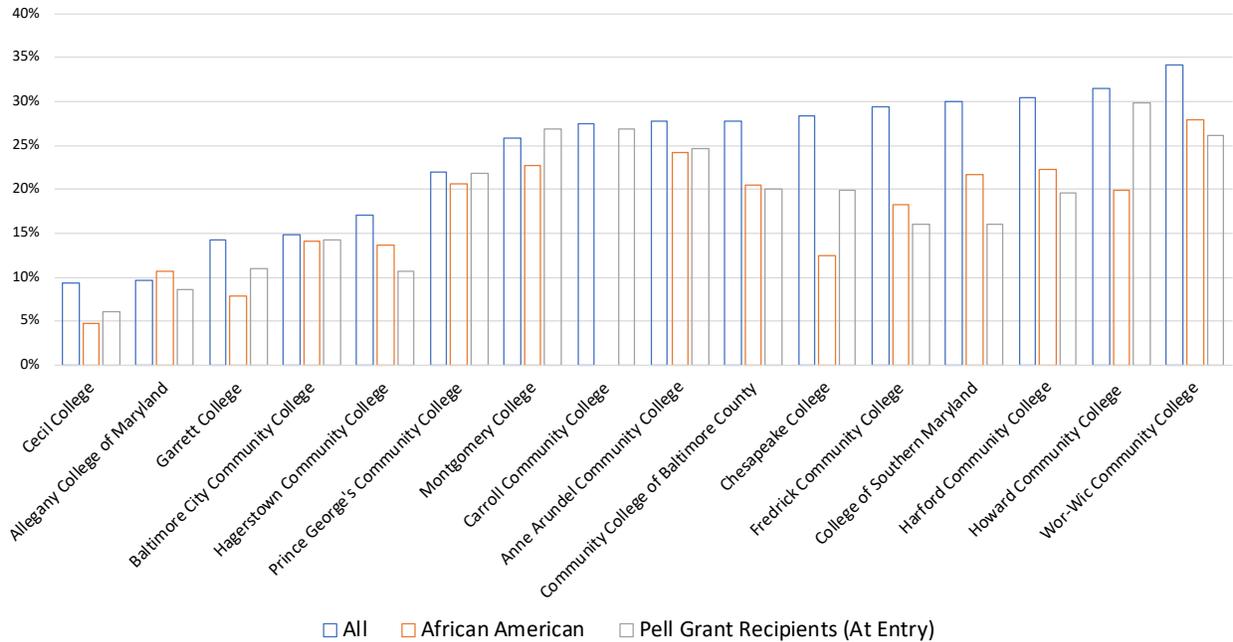


Figure 10: Community college transfer rates in 2016 by institution and characteristics of interest, Maryland
 Note: Transfer rates are four-year rates for the 2012 entry cohort. Carroll Community College enrolled fewer than 15 first-time, full-time African American students in Fall of 2012

Similarly, graduate rates varied across community colleges. Among community colleges, the graduation rate for all students ranged from 5% to 24% (see Figure 11). Among African American the graduation rate ranged from 5% to 28% and from 4% to 23% for Pell Grant recipients. Graduation rates for African American students were higher than the rate for all students in 9 out of 16 community colleges. In contrast, graduation rates for African American students in the community colleges in Allegany, Cecil, and Garrett County were much lower than the rates for all students and Pell Grant recipients. In most community colleges, Pell Grant recipients graduated at a similar rate as the overall rate. With the exception of Baltimore City Community College, the community colleges with the five lowest transfer rates had higher graduation rates suggesting a relationship between transfer and graduation rates. That is, rather than transfer, students completed their degree at the community college.

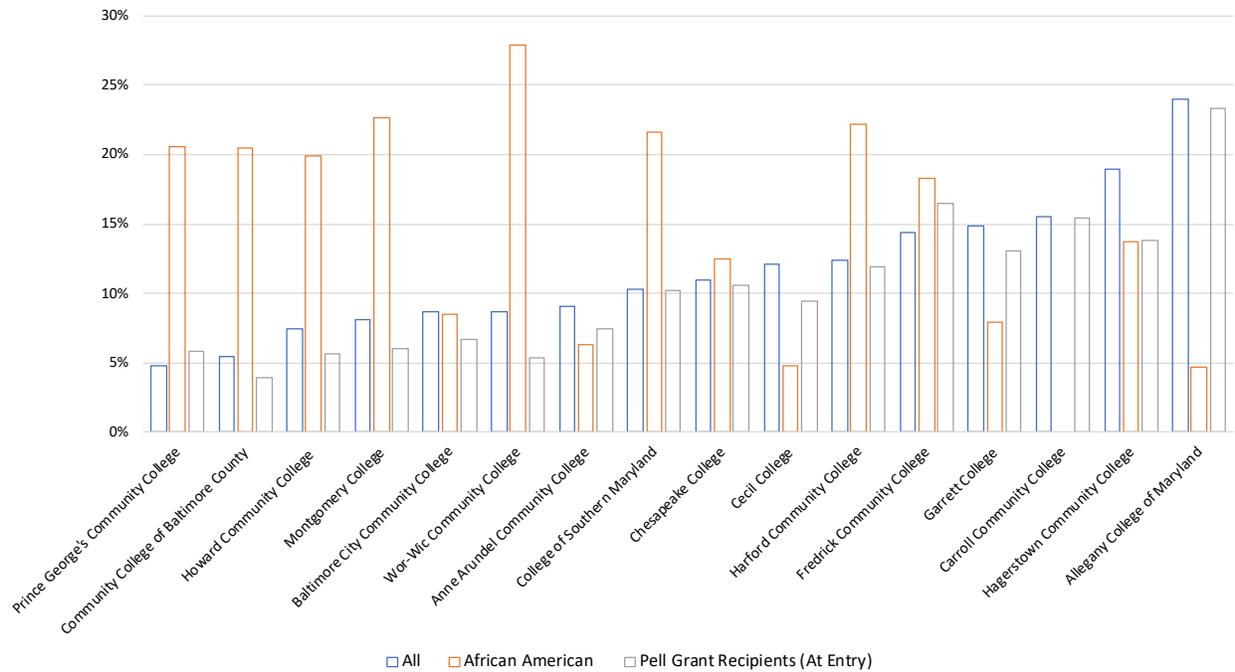


Figure 11: Community college graduation rates in 2016 by institution and characteristics of interest, Maryland

Note: Graduation rates are four-year rates for the 2012 entry cohort. Carroll Community College enrolled fewer than 15 first-time, full-time African American students in Fall of 2012

In Maryland community colleges, graduation and transfer rates also differed by remediation status and completion, as presented in Figure 12. Students entering college are required to take placement tests. Based on these assessments, students are determined either “college ready” and thus can enroll in college level courses, or they are considered “developmental” and in need of remediation in one or more subject areas before enrolling in college courses. College ready students, those who do not need remediation in any subject area, graduate or transfer at a rate of 69%. Developmental completers, students who needed remediation in at least one subject and completed the required remedial courses, graduated or transferred at a rate of 54%. The graduation or transfer rate of developmental non-completers, those students who needed remediation but did not complete the required remedial courses, was 27%. In other words, students who were assessed to need remediation by their institution and completed remedial courses transferred or graduated at a rate of 17 percentage points higher than those who did not complete remedial courses.

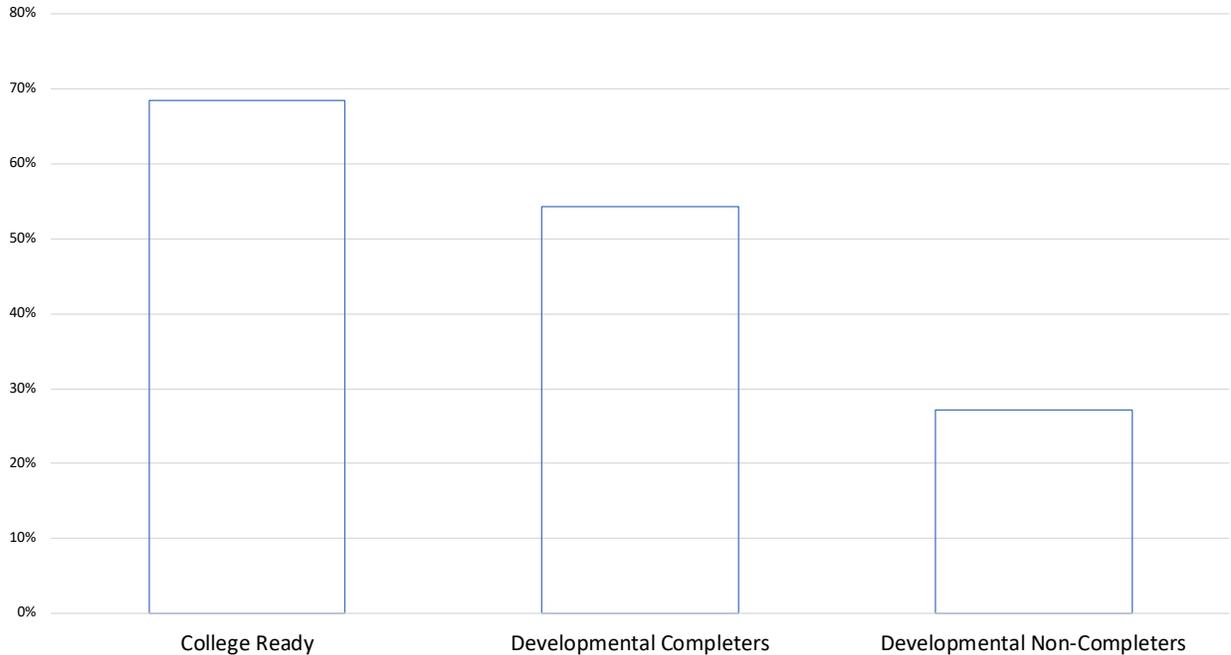


Figure 12: Community college transfer or graduation rates in 2016 of an analysis cohort by remediation status and completion, Maryland

Note: Analysis cohort includes students in the entering class of 2012 who enrolled in at least 18 credit hours within two years after matriculation. “College ready” are students who were assessed not to need remediation in any subject area. “Developmental completers” are students who were assessed to need remediation in at least one subject area and completed all required remedial coursework. “Developmental non-completers” are students who were assessed to need remediation in at least one subject area and did not complete all required remedial coursework.

Retention and Graduation Rates at Four-Year Public Institutions

At four-year public institutions, the average retention rate in 2016, the rate at which students in the 2015 entry cohort returned for a second year at that institution, was 77%. As shown in Figure 13, the average retention rate for all students ranged from 58% to 95% by institution. The retention rate at HBCUs was lower than almost all other four-year public institutions. In contrast to retention at community colleges, the average retention rate of African American students and Pell Grant recipients at four-year institutions was similar to the average rate for all students.

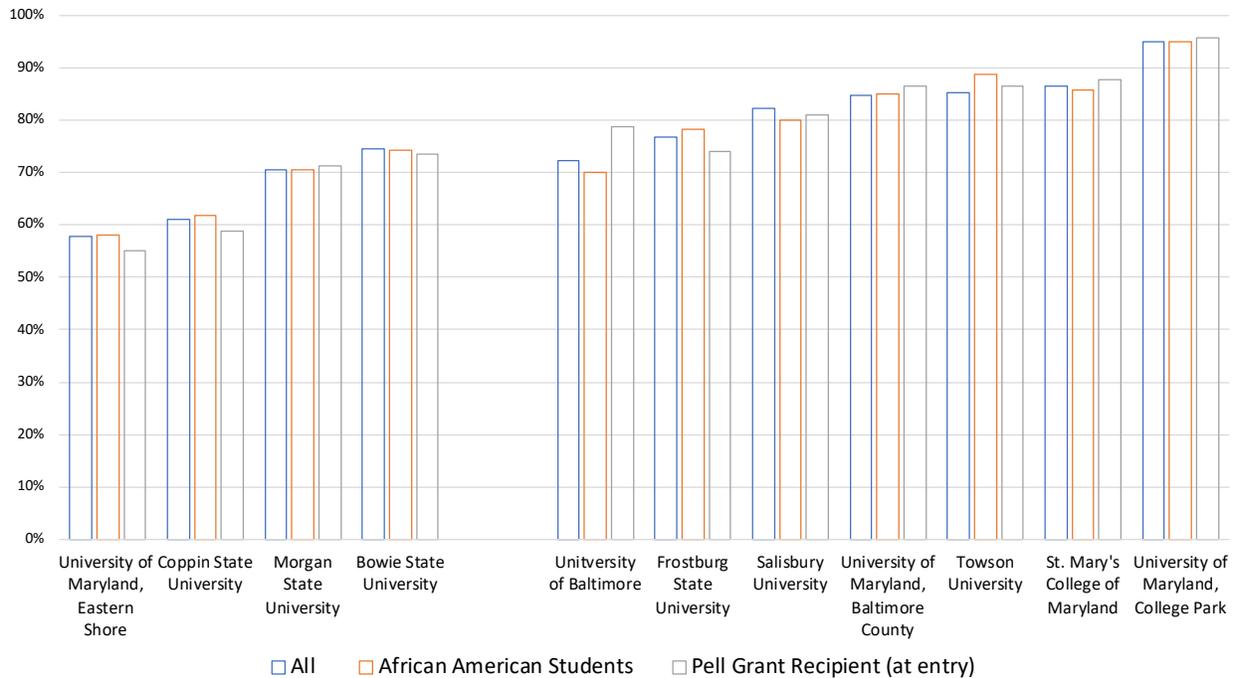


Figure 13: Retention rates in 2016 by four-year public institutions and characteristic of interest, Maryland
 Note: Retention rates represents the percentage of students in the 2015 undergraduate cohort that returned for the second year.

For the 2012 cohort, the average four-year graduation rate at four-year public institutions was 56%. In contrast to retention rates, graduation rates varied across institutions. As shown in Figure 14, graduation rates ranged from 20% to 86%. Like retention rates, the graduation rate at Maryland HBCUs was lower than that of other four-year institutions, with the exception of the University of Baltimore. The average graduation rate for HBCUs was 35% compared to 68% for non-HBCUs. On average for non-HBCUs, African American students' graduation rate was 6 percentage points lower than the rate for all students. Pell Grant recipients in non-HBCUs had a graduation rate that was on average 4 percentage points lower than the rate for all students. In contrast, there was little variation between the graduation rate of all students, African American students, and Pell Grant recipient rates at HBCUs, most likely because these institutions enroll high percentages of African American and Pell Grant recipients.

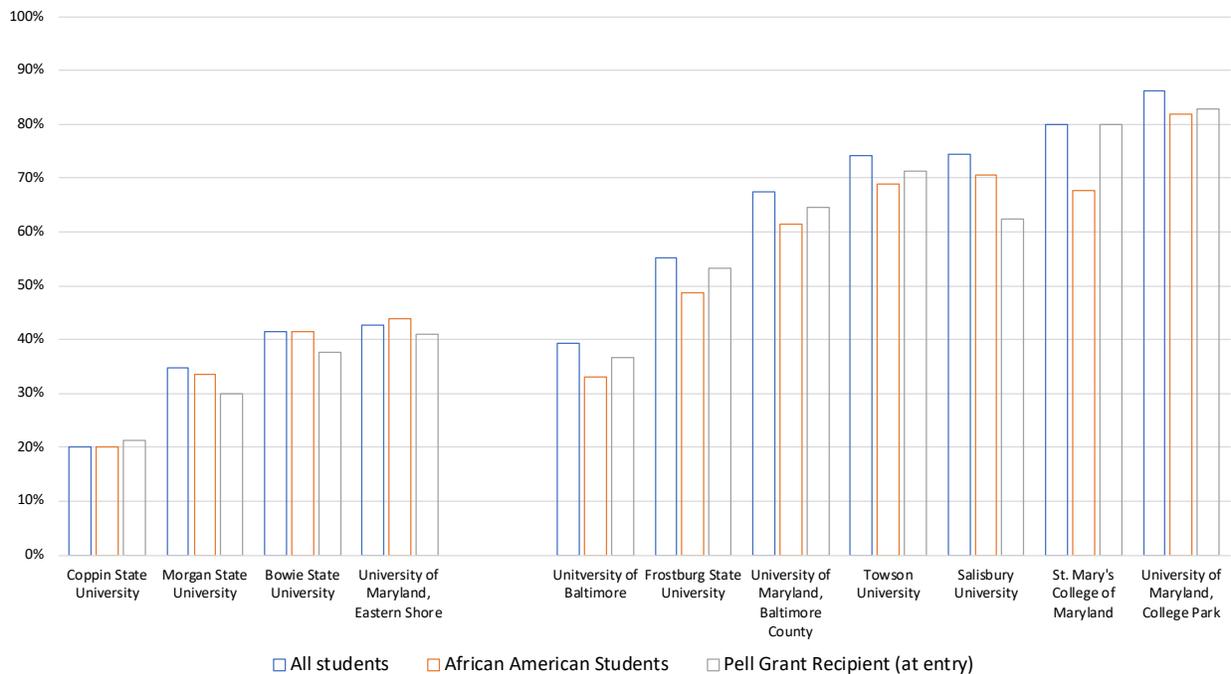


Figure 14: Graduation rates in 2016 by four-year public institutions and characteristic of interest, Maryland
 Note: Graduation rates are six-year rates for the 2010 cohort of first-time, full-time undergraduates.

Discussion and Implications

Students in Maryland are attending college—71% enrolled within two years of graduating from high school, but the enrollment rate and where students enroll varies by race/ethnicity, socio-economic status, and county. Some of these differences are expected; enrollment in community college is closely tied to the demographic composition of the county where the school is located, and HBCUs enroll predominately African American students, many whom are low-income. However, the differences in access by race and socioeconomic status suggest that some students face more obstacles to college enrollment than others. These range from having access to a college counselor to taking a college entrance exam, meeting a college’s minimum academic standards, or actually applying to college.¹²

While students in Maryland are enrolling in college, there is a group of students who attend college but do not persist and receive an education credential. In Maryland, this “forgotten half” are African American and low-income students, particular those who attend community colleges where 64% students did not transfer or graduate within four-years. Of students attending four-year public institutions, almost half, 44%, did not complete their degree within six years. Persistence also varies by institution. Community colleges that enroll larger populations of minority students or students from low-income families have lower graduation and transfer rates. Similarly, graduation rates from four-year public institutions vary by institution, with rates at HBCUs lower than other four-year public institutions.

¹² Klasik, D. (2013). *The college application gauntlet: The obstacles presented by the steps to college enrollment*. College Park, MD: Maryland Equity Project, The University of Maryland.

One barrier to transferring or graduating is remedial course completion. We found that community college students who completed remedial courses transferred or graduated at a higher rate than those who were needed remediation but did not complete the remedial courses. In addition, remedial courses at community colleges and four-year public institutions do not count for college credits, creating an additional barrier to persistence since it increases the time to a degree and costs of enrollment.

The challenge for Maryland is to identify and address the barriers to access and persistence. This challenge is multifaceted. For students, it reflects uneven preparation at the high school level and differences in access to educational opportunities tied to attending segregated and high poverty schools. It also reflects the challenges of living in a community, whether it is urban or rural, where social and economic disadvantaged is concentrated and there is limited access to employment, health care and housing. It is also a challenge for institutions, since the task of providing remediation falls unequally across institutions. One approach to addressing remediation is to redesign remedial courses so they are more engaging for students, shortening the remedial course taking sequence, improving the quality of course, and allowing students to take remedial course at the same time as college-level, credit-bearing courses¹³. Some colleges in the University System of Maryland have adopted this approach, but postsecondary institutions need additional resources to redesign courses and scale the approach to reach more students.¹⁴ Beyond that, colleges and universities can help their students persist through college by improving counseling and guidance services, institutional procedures, and school-employer linkages.¹⁵ Rosenbaum, Ahearn, Becker, and Rosenbaum (2015) argue that these reforms would help students in the “forgotten half” better understand their college and degree options and successfully transition into careers.

¹³ Knepler, E., Klasik, D., & Sunderman, G. L. (2014). *Academic transformations: Redesigning college remedial courses to achieve equity*. College Park, MD: Maryland Equity Project, The University of Maryland.

¹⁴ Ibid.

¹⁵ Rosenbaum, J., Ahearn, C., Becker, K. & Rosenbaum, J. (2015). *The new forgotten half and research directions to support them summary and key findings*. New York: William T. Grant Foundation.

Appendix A.

Table 1 Rate of post-secondary enrollments by October 2018 by high school graduation cohort and county of residence, Maryland

Note: The number of years following high school graduation impacts the postsecondary enrollment numbers. For example, the rate of post-secondary enrollment in 2017 is lower than prior years in part because there is only one year following high school graduation for a student to enroll. All other cohort years include students who enroll two or more years after graduating high school.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Allegany	63%	72%	70%	70%	66%	67%	59%	63%	58%	55%
Anne Arundel	78%	80%	78%	77%	78%	77%	75%	74%	71%	67%
Baltimore City	71%	71%	68%	65%	62%	59%	57%	55%	52%	48%
Baltimore County	79%	79%	79%	78%	78%	76%	75%	73%	71%	64%
Calvert	79%	79%	80%	78%	77%	77%	74%	72%	73%	69%
Caroline	63%	71%	67%	63%	64%	61%	61%	62%	55%	48%
Carroll	76%	80%	77%	78%	79%	79%	77%	78%	76%	70%
Cecil	70%	66%	67%	68%	69%	64%	62%	61%	56%	55%
Charles	78%	77%	77%	76%	76%	74%	73%	69%	69%	64%
Dorchester	70%	67%	68%	67%	59%	57%	49%	58%	50%	54%
Frederick	80%	83%	82%	82%	84%	82%	81%	81%	80%	74%
Garrett	72%	76%	71%	76%	69%	68%	66%	59%	62%	61%
Harford	78%	81%	82%	81%	82%	80%	80%	78%	76%	73%
Howard	89%	90%	89%	92%	91%	91%	90%	89%	89%	86%
Kent	61%	60%	65%	60%	55%	67%	51%	58%	58%	45%
Montgomery	87%	87%	87%	87%	88%	88%	86%	85%	83%	78%
Prince George's	71%	70%	72%	70%	70%	69%	66%	64%	62%	55%
Queen Anne's	75%	80%	78%	76%	76%	74%	74%	77%	71%	68%
Somerset	76%	70%	70%	65%	61%	63%	60%	56%	54%	52%
St. Mary's	78%	77%	75%	74%	74%	71%	66%	66%	62%	55%
Talbot	78%	74%	74%	80%	76%	75%	70%	67%	73%	62%
Washington	72%	71%	69%	68%	70%	69%	63%	65%	61%	55%
Wicomico	77%	78%	77%	71%	73%	70%	67%	66%	67%	62%
Worcester	75%	79%	76%	75%	71%	75%	70%	71%	67%	65%
Maryland	78%	79%	78%	78%	78%	76%	75%	74%	71%	66%

About the Maryland Equity Project

The Maryland Equity Project seeks to improve education through research that supports an informed public policy debate on the quality and distribution of educational opportunities. It conducts, synthesizes, and distributes research on key educational issues in Maryland and facilitates collaboration between researchers and policymakers. The Maryland Equity Project is a program in the Department of Teaching and Learning, Policy and Leadership in the College of Education at The University of Maryland.

Copyright © 2019 The Maryland Equity Project, University of Maryland, College Park, MD.

This publication should be cited as: Healy, C. E. (2019). *Access to colleges and universities in Maryland: Who enrolls and who persists?* College Park, MD: Maryland Equity Project, The University of Maryland.

Additional copies of this report may be obtained from our website at: www.mdequity.org

Maryland Equity Project
College of Education
University of Maryland
2110 Benjamin Building
College Park, MD 20740

Phone: 301-405-3572

Email: mdequity@umd.edu

Website: www.mdequity.org

Twitter @mdequity

About the Author

Charlotte E. Healy is a graduate research assistant for the Maryland Equity Project and a doctoral student in the Education Policy and Leadership Program in the Department of Teaching and Learning, Policy and Leadership. Charlotte received a B.A. in Education from Furman University and a M.Ed. in Teaching and Learning from Clemson University. Prior to joining the Maryland Equity Project she spent four years teaching middle school Language Arts and Math in a Title I school in South Carolina. Her doctoral research focuses on the political and legal dimensions of access to special education services.