

Launching into Adulthood

2009 Graduates of Baltimore City Public Schools

Rachel E. Durham & Faith Connolly

April 2018

In a series of briefs, BERC presents research describing the educational and workforce outcomes of Baltimore graduates six years after graduation. We focus on the class of 2009 as it is the most recent graduating class for whom outcomes after six years (through age 24) can be observed. To conduct this research, BERC partnered with Baltimore's Promise, the [Institute for Education Policy](#), and the [Maryland Longitudinal Data System \(MLDS\)](#). We strongly [encourage readers to visit the methodology brief to learn about the strengths and limitations of the data used in this research.](#)

Each brief provides a snapshot of different parts of graduates' trajectories and focus on one or all of these four outcomes: (1) enrolling in college, (2) completing a college degree, (3) median annual income, and (4) earning a [livable wage](#).

The fall just after high school. In that first fall after graduation, what did graduates do? We find that more than half (52%) were in college, yet 26% were not found in either college enrollment or Maryland wage records.

Earnings and Degree Completion. In the second brief, we examine graduates' earnings, and find that graduates with degrees earned substantially more than those who did not. The median annual income for youth with a bachelor's degree was \$18,968, whereas median income among those who had never enrolled in college was \$13,374.

Starting in a 4-Year College. In the third brief, we followed the graduates who started in a 4-year college in the fall after high school. These graduates were the most likely to earn a degree (32%) within six years. About 24% were earning a livable wage. In contrast, fewer than one-in-ten of those with no college experience earned a livable wage.

Not in School and Not Working. In the fourth brief, we focus on the graduates who were neither in college nor in Maryland wage records the first fall after high school. We find that about a third (38%) enrolled in college at some point, and most joined the workforce (78%), with about 9% earning a livable wage after six years.

High School Type. In the fifth brief, we examine whether college enrollment, degree completion, earnings, or the likelihood of making a livable wage differ according to the type of high school from which students graduated. We found that 32% of youth who graduated from entrance criteria schools completed degrees, compared to 6% of graduates of other high school types.

Gender and Race. The sixth brief looks at outcomes by gender and race. We find that regardless of race, female graduates were more likely to have enrolled in college (75%) than males (66%). However, non-African-American male (26%) and non-African-American female graduates (32%) were more likely to have completed a degree than African American male (8%) or female graduates (12%).

Receipt of Services. The seventh brief explores outcomes by high school service receipt defined as lower income (eligible for free and reduced-price meals) or receiving special education services. Students from lower income families were just as likely to enroll in college as the cohort average (72%), but slightly less likely to complete a degree (10% versus 12%). In contrast, about 3% of graduates who received special education services completed a college degree within six years.

Discussion and Recommendations

Our findings raise more questions than they answer. We also acknowledge that the first six years after high school graduation is a relatively short period of time for these young adults to have achieved economic stability or independence. However, identifying areas in which the city can strengthen requires that we understand the opportunities that Baltimore's emerging adults availed themselves of when they graduated from high school, and how those experiences connect to their economic well-being. The results point to ways that the high school-to-postsecondary transition in Baltimore might be smoothed.

We hope that the findings from this research can be the basis of a fruitful conversation about what experiences and opportunities City Schools students should have in high school to be successful young adults, as well as what future research would be most useful for Baltimore stakeholders.

From the findings we suggest the following recommendations:

- Accountability reporting for K12 and postsecondary institutions should include transition-to-work metrics on employment and wages earned after completion. This could better enable students to understand how credentials can translate into gainful employment.
- Counseling for students in middle and high school should focus on careers of interest and their associated pathways. Students should also be provided detailed information about what specific coursework, grades, and credentials they will need to progress towards their chosen careers.
- Conversations with youth should also include wage and salary expectations for different career pathways, what a livable wage means, and how earnings for particular jobs measure up against that threshold.

College and Work Activity during the First Fall After Graduation

Rachel E. Durham & Faith Connolly

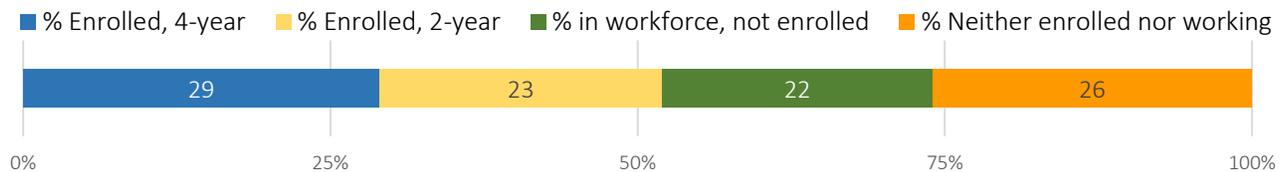
April 2018

This brief is the first in BERC’s *Launching into Adulthood series*, which examines the trajectories of Baltimore graduates. A partnership with Baltimore’s Promise and the Maryland Longitudinal Data System made it possible to examine both college and earnings outcomes for Baltimore City Public Schools (City Schools) graduates. We chose a single class, graduates in 2009, to examine college experiences and workforce activity.

In this brief we explore City Schools graduates’ destinations during the fall after high school, in college and the formal workforce.

Fall After Graduation

Figure 1. Percent of City Schools graduates enrolled in college or working in Maryland workforce during the fall after high school (class of 2009).



In the first fall after high school, over half the graduates enrolled in either 4-year (29%) or 2-year (23%) college. Nearly half of both groups were also working while they were enrolled. About 22% of graduates were in the workforce and were not enrolled in college. The remaining 26% were not found to be enrolled or working in the formal labor force. Stated another way, 74% of graduates could be documented as in college, the Maryland workforce, or both.

Conclusions

In total, 52% of City Schools graduates enrolled in some type of college the year they graduated. National college enrollment data for the class of 2009 show that 54% of lower income graduates enrolled in college.ⁱ This suggests that City Schools’ graduates, who are predominantly lower-income, enroll at levels similar to their peers in the country as a whole.

The share of graduates in the class of 2009 who were enrolled or working in Maryland the fall after high school is similar to those found among other recent classes.ⁱⁱ The surprising number of high school graduates who are neither in college or working in Maryland the fall after graduation is of concern. With no known traditional means of supporting themselves or a family, their path forward is unclear. Further research is necessary to understand the pathways of this group.

For details about the data source and methodology [see *Launching into Adulthood Methodology brief*](#).

We are grateful for support from Baltimore’s Promise, which allowed BERC to complete this research.

ⁱ U.S. Department of Education. (2017). *Digest of Education Statistics*, Table 302.30. Washington, DC: Institute of Education Sciences, National Center for Education Statistics.

ⁱⁱ Durham, R.E., Connolly, F. (2016). Postsecondary college and workforce outcomes among Baltimore city graduates. MLDS Research Colloquia Series. Retrieved from https://mldscenter.maryland.gov/egov/Publications/ResearchSeries/Research_Colloquium_Nov_3_2016_FINAL.pdf

Salaries and Wages of Baltimore City Graduates Six Years after Earning a High School Diploma

Rachel E. Durham & Faith Connolly

April 2018

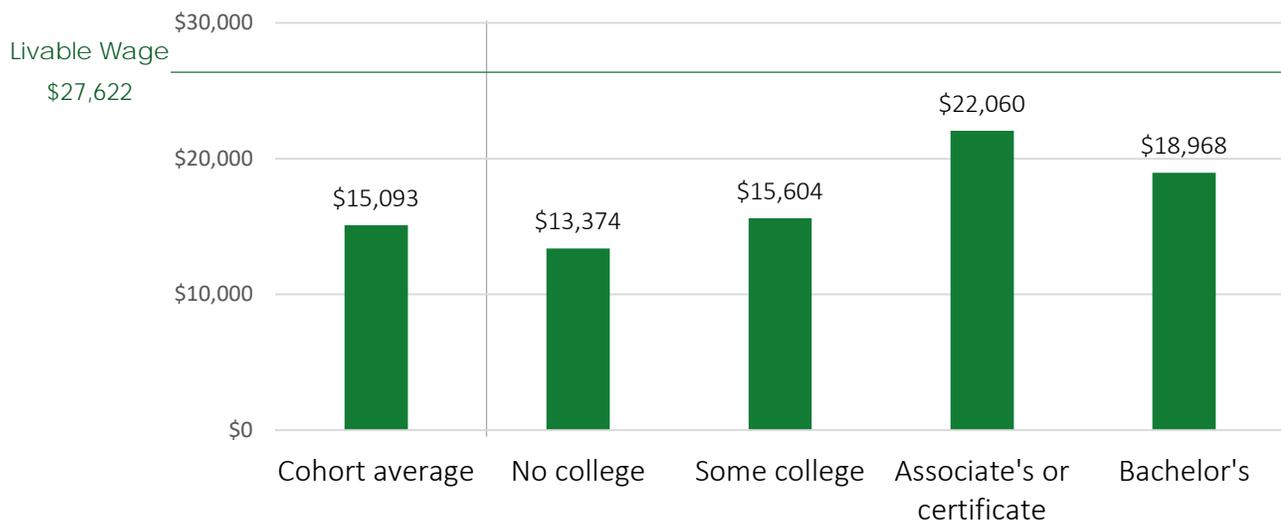
This brief is the second in BERC’s *Launching into Adulthood* series, which examines the trajectories of Baltimore graduates over six years. BERC established a partnership with Baltimore’s Promise and the Maryland Longitudinal Data System, which has made it possible to examine both college and earnings outcomes among Baltimore City Public Schools graduates.

The question addressed in this brief is, how much were graduates earning six years after high school graduation? Was it enough to make a livable wage? And how many of those who went to college and completed degrees were earning a livable wage? We chose a single class, graduates in 2009, to examine college experiences and workforce activity six years later.

Median Earnings

The median income for all graduates after six years was \$15,093. (See Figure 1.) For those who had completed a bachelor’s degree, it was \$18,968, and for those with an associate’s but no bachelor’s degree, \$22,060. Among graduates who enrolled in college but had not completed a degree, median income was \$15,604. For those who never enrolled in college, it was \$13,374. (See Figure 1). In contrast, the livable wage threshold -- the minimum annual amount one adult needs to cover basic household expenses -- was \$27,622. ([Livable wage is for Baltimore and adjusted annually.](#))

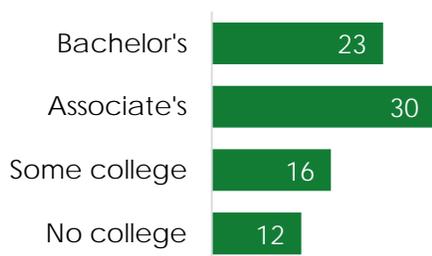
Figure 1. Median annual income six years after high school for all graduates, by college completion status (class of 2009).



Earning a Livable Wage

Another measure of economic well-being after six years is the percent of graduates who earned a *livable wage*. (See Figure 2.) Among graduates with a bachelor’s degree, 23% earned a livable wage in year six. Among those whose highest attainment was an associate’s degree, 30% earned a livable wage. Among graduates who had some college but had not completed a degree, 16% earned a livable wage, and for those who never enrolled, 12% earned a livable wage.

Figure 2. Percent of all graduates earning a livable wage, by college completion status (class of 2009).



Conclusions

For the cohort overall, 16 percent were earning a livable wage, and among those with degrees, median annual income was approximately \$20,000 six years after high school. However, those with college degrees were twice as likely as those with no college to earn a livable wage. Graduates who had completed associate’s degrees earned slightly more than those with a bachelor’s, yet we surmise that attending a 4-year college may have incurred a short-term opportunity cost of having stayed in college longer and starting at an entry level position later.

Researchⁱ on U.S. employment has found that in recent years, young adults are taking longer to reach full employment. Specifically, fewer 18 to 24 year-olds worked full time in 2012 than in 1980. Similarly, the age at which workers reach median salary levels has increased from age 26 to age 30. This trend is even more salient for African-American workers, who do not reach median salary until age 33. Some of these trends are related to the recent economic recession, but they are also due to more young adults’ obtaining postsecondary education and occupational training during early adulthood.ⁱⁱ

Future research should explore how graduates’ earnings are related to employment stability, frequency of job changes, and industry of work.

For details about the data source and methodology [see Launching into Adulthood Methodology brief](#).

We are grateful for support from Baltimore’s Promise, which allowed BERC to complete this research.

^{i, ii} Carnevale, A. P., Hanson, A. R., & Gulish, A. (2013). Failure to Launch: Structural Shift and the New Lost Generation. Georgetown University Center on Education and the Workforce.

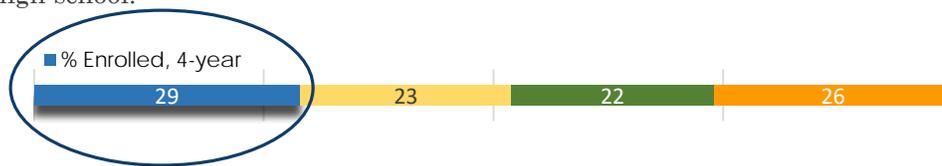
First Fall Four-Year College Enrollees: Earnings and Livable Wages after Six Years

Rachel E. Durham & Faith Connolly

April 2018

This brief is the third in BERC's *Launching into Adulthood series*, which examines the trajectories of Baltimore graduates over six years. A partnership with Baltimore's Promise and the Maryland Longitudinal Data System made it possible to examine both college and earnings outcomes for Baltimore City Public Schools (City Schools) graduates. We chose a single class, graduates in 2009, to examine college experiences and workforce activity.

In this brief we focus on the 29% of City Schools graduates who enrolled immediately into a 4-year college the fall after high school.



Graduates Who Enrolled in a 4-Year College in the Fall

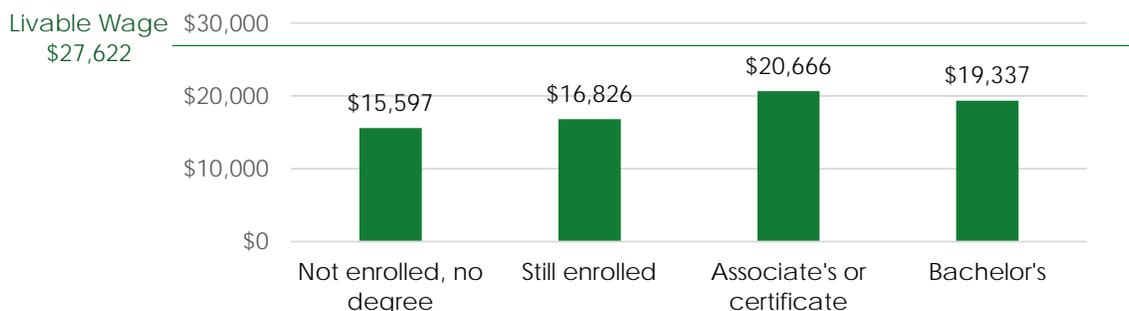
College Completion. After six years, 32% had completed bachelor's degrees with an additional 1% completing associate's degrees. (See Figure 1.) Over one-quarter (28%) were still enrolled. Finally, 39% did not complete a degree and were no longer enrolled, and on average, they remained enrolled for almost three years (34 months). Notably, 88% of all fall 4-year-enrolled graduates worked at least some of the time that they spent enrolled.

Figure 1. Percent of graduates enrolling in 4-year colleges in the fall after high school who completed degrees, were still enrolled, or had left college after six years (class of 2009).



Earnings. The median annual income in year six for graduates who had completed a bachelor's degree was \$19,337. For those with associate's degrees or certificates, it was \$20,666. For graduates who were still enrolled in college, median annual income was \$16,826, and for those who were no longer enrolled but had not completed a degree, median annual income was \$15,597. (See Figure 2.)

Figure 2. Median annual earnings for graduates enrolling in 4-year colleges in the fall after high school, by degree completion status after six years (class of 2009).



Livable Wage. For graduates with bachelor’s degrees who were working in Maryland, 24% were earning a [livable wage](#) after six years. (See Figure 3.) Among those with associate’s degrees, 18% were earning a livable wage. For those who were still enrolled it was 24%, and among those with some college but no degree, 16%. The average share who earned a livable wage across all four groups was 20%.

Figure 3. Percent earning a livable wage among graduates enrolling in 4-year colleges in the fall after high school, by degree completion status after six years (class of 2009).



Conclusions

One-third of students who enrolled in a 4-year college in the fall after graduation had completed a college degree within six years. Nationally, about 54% of first-time 4-year college enrollees complete a degree in the same time frame.ⁱ Yet City Schools graduates are not comparable to peers nationally, as most were eligible for free and reduced-price meals in school. A better comparison shows that between 21% and 29% of 24 year olds from families in the lower half of the income distribution complete degrees,ⁱⁱ in which case Baltimore graduates were just as likely to complete degrees as their peers nationally. Although two-thirds did not have a degree, 28% were still persisting in college.

Just as [for the cohort overall](#), the median annual income for graduates whose highest attainment was an associate’s degree was slightly higher than for those with a bachelor’s. Again, we surmise that attending a 4-year college may have incurred a short-term opportunity cost. Further, the fact that a smaller share of those with associate’s degrees earned a livable wage (18% vs. 24%) suggests that the full range of salaries and wages for those who completed a bachelor’s degree is more favorable. It is important to note that research nationally has found that differences in earnings between those with and without bachelor’s degrees are much smaller at younger ages. At older ages (e.g., age 40-44), however, those with bachelor’s degrees earn substantially more than those without.ⁱⁱⁱ

Future research should explore the college persistence or transfer patterns among those who enrolled and identify high school or college-level factors that prevented students from completing degrees.

For details about the data source and methodology [see *Launching into Adulthood Methodology* brief](#).

We are grateful for support from Baltimore’s Promise, which allowed BERC to complete this research.

ⁱ National Center for Education Statistics. (2017). [IPEDS] Integrated Postsecondary Education Data System: Graduation and retention rates. Washington, D.C.: IES/NCES.

ⁱⁱ Cahalan, M., & Perna, L. (2015). Indicators of Higher Education Equity in the United States: 45 Year Trend Report. Pell Institute for the Study of Opportunity in Higher Education.

ⁱⁱⁱ Carnevale, A.P., Rose, S.J., Cheah, B. (2013). The college payoff: Education, occupations, lifetime earnings. The Georgetown University Center on Education and the Workforce.

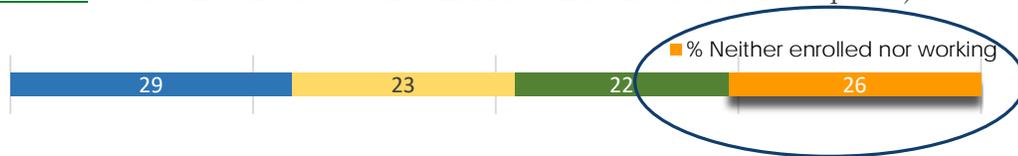
Those Neither in College nor Work the First Fall after Graduation: Earnings and Livable Wages after Six Years

Rachel E. Durham & Faith Connolly

April 2018

This brief is the fourth in BEREC's *Launching into Adulthood series*, which examines the trajectories of Baltimore graduates six years later. A partnership with Baltimore's Promise and the Maryland Longitudinal Data System made it possible to examine both college and earnings outcomes for Baltimore City Public Schools graduates. We chose a single class, graduates in 2009, to examine college experiences and workforce activity.

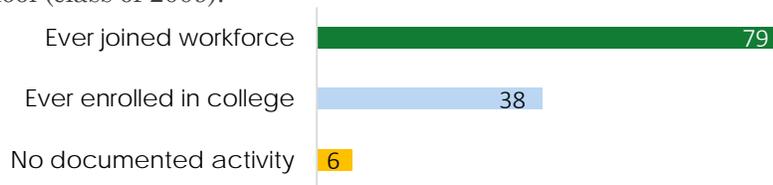
In this brief we focus on the 26% of City Schools graduates who were not enrolled in a college nation-wide and were not found working for a Maryland employer during the fall after high school. (As this group was identified by virtue of their absence from the data sources, we encourage the reader to [read the methods section for more detail](#) about what the data source includes and what it does not capture.)



Graduates Neither in College nor Working the Fall after High School

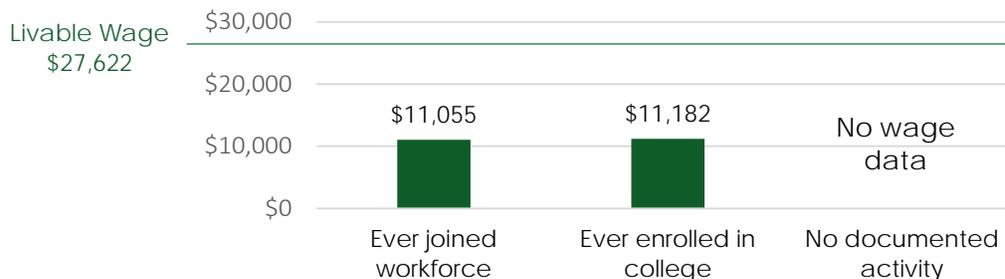
The data for this group show that while they may not have immediately enrolled in college, 38% enrolled at some point over six years, on average waiting two years to enroll. About two-thirds enrolled in a 2-year college. About 79% had a record of working in Maryland, although they may not have been consistently employed. These two former groups are not mutually exclusive, though, as some of those who enrolled also worked. Finally, after six years, 6% had still not appeared in either college enrollment or Maryland wage data. (See Figure 1.)

Figure 1. Activities over six years for graduates who were neither enrolled nor working during the fall after high school (class of 2009).



Earnings. Of graduates who eventually earned wages from a Maryland employer, their median annual income in year six was \$11,055. (See Figure 2.) For those who enrolled in college during this time, by year six median annual income was \$11,182. Finally, 15% were not found in the wage data during year six; thus their median annual income cannot be determined.

Figure 2. Median annual earnings in year six for graduates neither enrolled nor working in the fall after high school (class of 2009).



Livable Wage. Approximately 9% of the subgroup who later worked for a Maryland employer earned a [livable wage](#) in year six. Among those who ever enrolled in college, 8% earned a livable wage that year. For those with no documented activity in college or the Maryland workforce over year six, the percent who earned a livable wage is unknown. (See Figure 3.)

Figure 3. Percent earning a livable wage in year six among graduates who were neither enrolled nor working during the fall after high school (class of 2009).



Conclusions

These findings suggest that a relationship exists between graduates’ activities the fall after high school and their earnings six years later. Compared to those [who immediately enrolled in a 4-year college](#), among whom 20% earned a livable wage, less than half as many not working or enrolled that fall earned a livable wage six years later. Additional research is needed to understand this group’s experiences in the workforce, as their six-year earnings are disconcertingly low. Questions arise regarding their workforce attachment and employment stability, as well as the quality of job opportunities available to them.

Of the 38% of this cohort who eventually enrolled in college, a small handful completed a degree within six years (results not shown). National research has also found that graduates who delay enrollment are less likely than immediate enrollees to complete a degree.ⁱ Further research is required to identify factors that prevented City Schools graduates who did enroll from enrolling sooner, to better set these graduates on a path to success.

Comparisons are difficult to obtain to put these findings into context. However, one recent studyⁱⁱ of a nationally representative 9th grade cohort looked three years after high school graduation and found that 6% were not in the labor force, and another 8% were unemployed. Compared to those who were working or enrolled in college, that study found that youth who were unemployed or not in the labor force were more likely to identify as racial minority, have parents with a high school diploma or less, and a cumulative high school GPA of less than 2.50.

For details about the data source and methodology [see *Launching into Adulthood Methodology* brief](#).

We are grateful for support from Baltimore’s Promise, which allowed BERC to complete this research.

ⁱ Bozick, R., & DeLuca, S. (2005). Better late than never? Delayed enrollment in the high school to college transition. *Social Forces*, 84(1), 531-554.

ⁱⁱ Radford, A.W., Fritch, L.B., Leu, K., Duprey, M. (2018). High School Longitudinal Study of 2009 (HSL: 09) Second Follow-Up: A First Look at Fall 2009 Ninth-Graders in 2016. NCES 2018-139. National Center for Education Statistics.

Differences in Earnings Six Years after Graduation by High School Type

Rachel E. Durham & Faith Connolly

April 2018

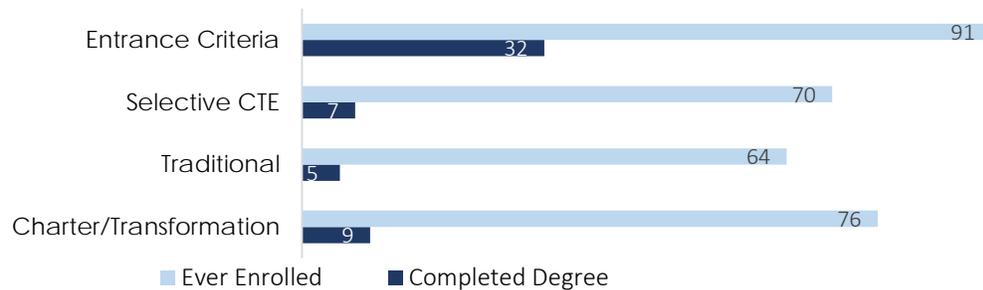
This brief is the fifth in BERC’s [Launching into Adulthood series](#), which examines the trajectories of Baltimore graduates over six years. BERC established a partnership with Baltimore’s Promise and the Maryland Longitudinal Data System (MLDS), which has made it possible to examine both college and earnings outcomes among Baltimore City Public Schools (City Schools) graduates.

In this brief we examine patterns of college enrollment, degree completion, earnings and making a livable wage by the type of high school from which students earned their diploma. As in each of these briefs, we chose graduates in 2009 to examine outcomes six years later.

High School Choice. Baltimore has four primary high school types. Entrance criteria schools have highly selective admission requirements. Selective Career and Technology Education (CTE) high schools also have admission requirements but they are somewhat less selective than entrance criteria schools. Finally, students may choose charter and transformation schools that provide unique or specialized options, or traditional high schools emphasizing specific academic or career programs (e.g., financial, health fields). [Click for more information about City Schools high schools.](#)

Enrollment and Degree Completion by High School Type

Figure 1. Percent of graduates who ever enrolled and completed either an associate’s or bachelor’s degree within six years, by high school type (class of 2009).



Entrance criteria high schools had the highest percentage of graduates ever enrolling and completing a degree within six years. Higher shares completing degrees is likely influenced by students’ having been sorted on entry; entrance criteria schools consistently see higher college enrollment rates at 4-year colleges, where City Schools graduates have had higher degree completion rates.ⁱ (See Figure 1.)

Earnings for Degree Completers

Graduates of both entrance criteria and selective CTE high schools who had completed a college degree were earning more in that sixth year, with a median annual income of approximately \$19,900, than those who graduated from a traditional or charter/transformation school (See Figure 2, left-hand panel.) The median annual income for degree holders from traditional high schools was \$17,713. For graduates of charter and transformation high schools, the median annual income for college graduates was \$14,775.

Livable Wages. For those with a college degree, 24% of entrance criteria and 18% of selective CTE graduates were earning a [livable wage](#) in their sixth year post-high school. Among degree holders from traditional high schools, 27% earned a livable wage. Approximately 5% of degree-holders who graduated from charter or transformation high schools were earning a livable wage. (see Figure 2, right-hand panel.)

Figure 2. Median annual earnings and the percent earning a livable wage six years after graduation for degree completers, by high school type (class of 2009).



Earnings for Young Adults with No College Experience

Of those who never enrolled in college, graduates of selective CTE schools earned the highest median income with \$16,916 in year six. The next highest was for graduates of entrance criteria high schools at \$16,102. The median annual income for graduates of traditional high schools with no college was \$12,760. For charter and transformation high school graduates with no college experience, median income was \$11,245. (See Figure 3, left-hand panel).

Figure 3. Median annual earnings and the percent earning a livable wage six years after graduation for those with no college experience, by high school type (class of 2009).



Among graduates who never enrolled in college, selective CTE graduates were the most likely to earn a livable wage (19%), followed by graduates of entrance criteria high schools (16%), graduates of charter and transformation schools (15%), and finally graduates of traditional high schools (12%). (See Figure 3, right-hand panel).

Conclusions

The high school sorting process is related to students' later enrollment in college and earnings. Regardless of high school attended, however, median annual income six years after high school was higher for graduates who completed a college degree than for those who had no college experience. Future research might identify specific practices in entrance criteria schools that relate to college enrollment and persistence, as well as show graduates of selective CTE high schools are leveraging skills they gained in those programs in the workforce.

For details about the data source and methodology see [Launching into Adulthood Methodology brief](#).

We are grateful for support from Baltimore's Promise, which allowed BERC to complete this research.

Differences among Young Adults Six Years after Graduation by Race and Gender

Rachel E. Durham & Faith Connolly

April 2018

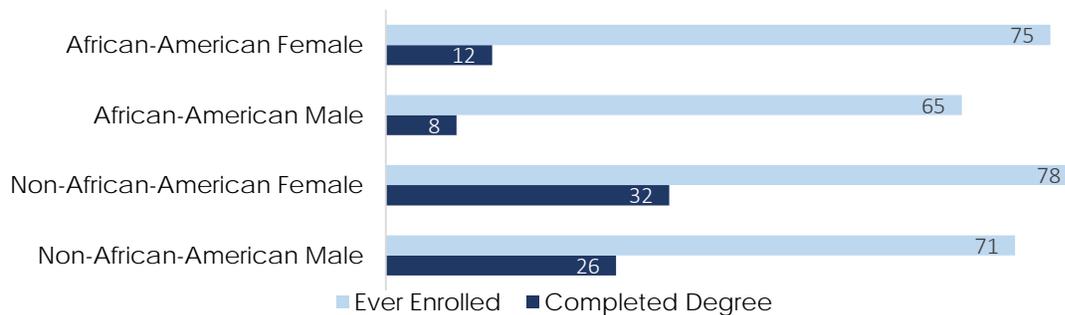
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This brief explores whether college degree completion, median annual earnings, and earning a livable wage differ by gender and race.

Enrollment and Degree Completion after Six Years

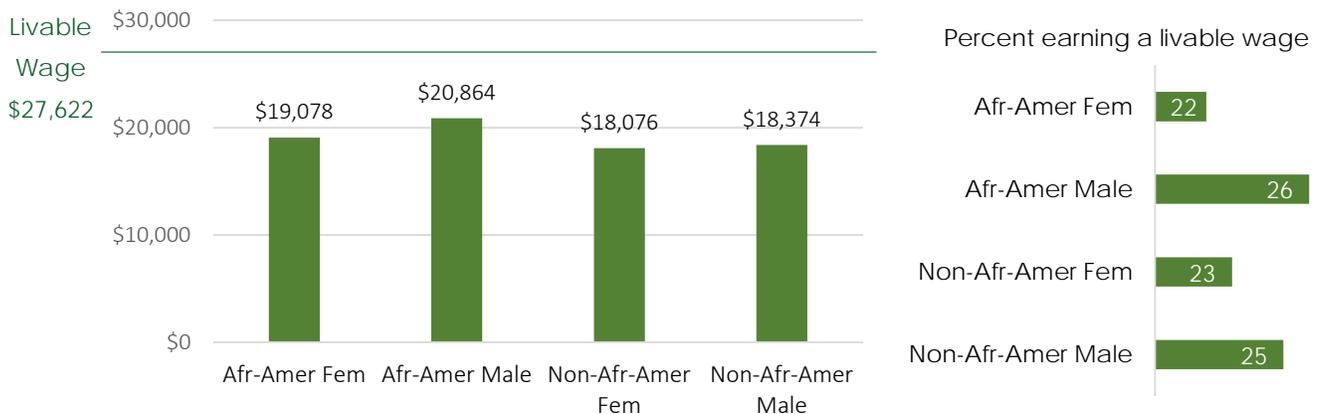
African-American male graduates were less likely to have enrolled in college over six years than African-American female or non-African-American graduates. Specifically, 65% of African-American male graduates enrolled in college, compared to 75% of African-American female, 71% of non-African-American male, and 78% of non-African-American female graduates. After six years, non-African-American graduates were over twice as likely as African-American graduates to have completed a college degree. (See Figure 1.)

Figure 1. Percent of graduates enrolling in college and completing degrees by race and gender (class of 2009).



Degree Completers

Figure 2. Median annual income and the percent earning a livable wage among college degree completers by race/gender (class of 2009).



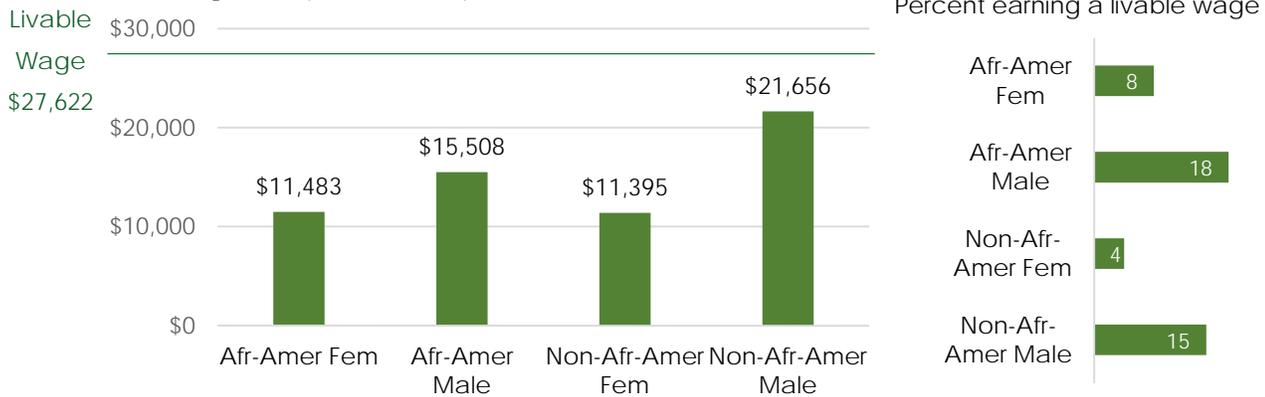
Among graduates who completed college degrees, African-American male graduates earned the highest median annual income in year six, at \$20,864, followed by African-American female graduates at \$19,078. Non-African-American male graduates' median annual income was \$18,374, and for non-African-American female graduates, \$18,076. (See Figure 2, left-hand panel.)

African-American male graduates with college degrees were the most likely, at 26%, to earn a [livable wage](#), compared to non-African-American male (25%), non-African-American female (23%), and African-American female graduates (22%). (See Figure 2, right-hand panel.)

Young Adults with No College Experience

Among students who did not enroll in college, non-African-American male graduates had higher annual median earnings six years out of high school (\$21,656) than African-American male (\$15,508), African-American female (\$11,483), or non-African-American female graduates (\$11,395). (See Figure 3, left-hand panel.) However, African-American male graduates were the most likely to be earning a livable wage at 18%, compared to African-American female (8%), non-African-American male (15%), or non-African-American female graduates (4%). (See Figure 3, right-hand panel.)

Figure 3. Median annual income and the percent of those who never enrolled earning a livable wage by race/gender (class of 2009).



Conclusions

Taken as a whole, these results show that differences in median annual earnings by both race and gender are less pronounced for high school graduates with college degrees than for high school graduates with no college experience. A college degree appears to be especially beneficial for African-Americans' earnings, as well as their likelihood of earning a livable wage. Among those who completed degrees, African-American male graduates had higher median annual earnings and were more likely than African-American female or non-African-American graduates with a college degree to earn a livable wage.

At the same time, African-American male graduates who never enrolled in college were the most likely to earn a livable wage relative to African-American female and non-African-American graduates with no college experience. These results point to a stark gender disparity, as well, since female graduates of any race, regardless of degree completion, were less likely to earn a livable wage than male graduates. Further research is necessary to determine whether household factors – perhaps family formation and child care – are responsible for such gender differences.

For details about the data source and methodology [see Launching into Adulthood Methodology brief](#).

We are grateful for support from Baltimore's Promise, which allowed BEREC to complete this research.

Differences among Young Adults Six Years after Graduation by Education Service Receipt in High School

Rachel E. Durham & Faith Connolly

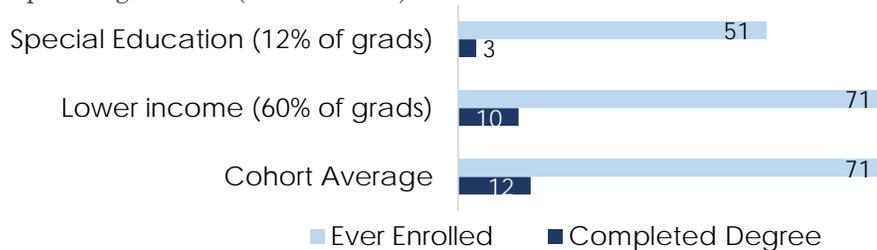
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This brief considers graduates six years after high school, and whether college enrollment, degree completion, median annual earnings, and the percent earning a [livable wage](#) differ according to education service receipt in 12th grade. Specifically, we compare outcomes for graduates whose family income made them eligible for free or reduced-price meals (“lower-income”), graduates who received special education services, and the average for the graduating cohort as a whole. As background, about 60% of the cohort were from lower income families and 12% received special education services in 12th grade.

Enrollment and Degree Completion after Six Years

Figure 1. Percent ever enrolling in college and completing degrees within six years, by education service receipt in high school (class of 2009).

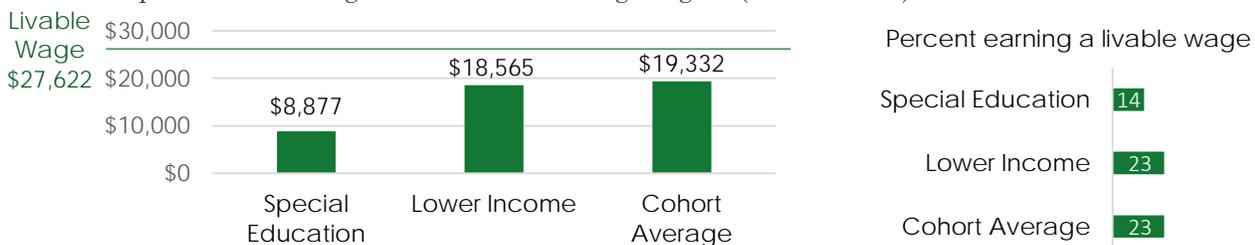


The percent of lower-income graduates who enrolled in college over six years was the same as for the graduating cohort as a whole (71%). The percent completing any type of degree was slightly lower, but on the whole similar (10% versus 12%). Graduates who received special education services were less likely to enroll in college, however, and the percent who completed a degree was 3% compared to the cohort average of 12%. (See Figure 1.) Next, we consider earnings differences for two groups: education service graduates who had completed a college degree within six years, and those who never enrolled in college.

Degree Completers

The median annual income in year six among lower-income graduates who had completed a college degree (\$18,565) was slightly lower than for the cohort overall (\$19,332). Median annual income for graduates who received special education services was \$8,877. (See Figure 2, left-hand panel.)

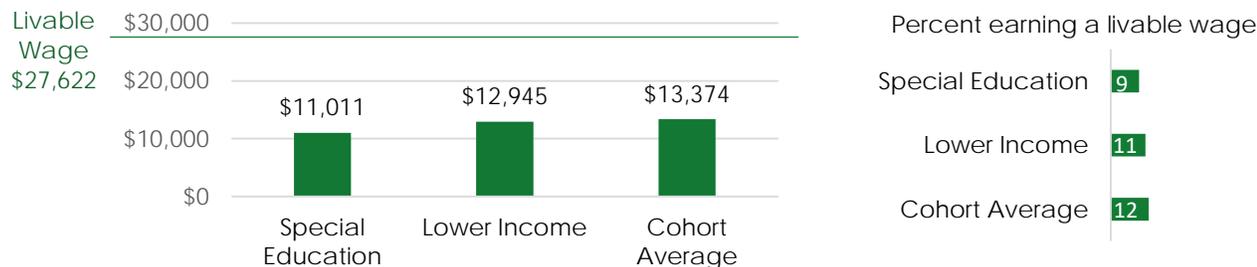
Figure 2. Median annual income and percent earning a livable wage after six years among lower-income and special education graduates with a college degree (class of 2009).



Whereas 23% of the full cohort and lower-income graduates with a college degree earned a livable wage, 14% of graduates with a degree who received special education earned a livable wage. (See Figure 2, right-hand panel.)

Young Adults with No College Experience

Figure 3. Median annual income and percent earning a livable wage after six years among lower-income and special education graduates who never enrolled in college (class of 2009).



Compared to the median annual income of \$13,374 for all cohort graduates with no college experience, the median annual income of graduates who received special education was \$11,011 after six years. For lower-income graduates who did not enroll in college, it was \$12,945. Whereas 12% of all graduates with no college experience earned a livable wage after six years, about 9% of non-enrollees who received special education earned a livable wage. About 11% of lower-income graduates who did not enroll in college over these six years earned a livable wage in year six.

Conclusions

We find that among high school graduates, being from a lower-income family did not relate to rates of enrollment in college, relative to the cohort average, and similar shares completed degrees in six years. Graduates who received special education services, however, were less likely to enroll in college and complete a degree. By comparison, a national study of students with disabilities found that 55% enrolled in college and 38% completed a degree within six years.ⁱ Further, even with a college degree, the median annual earnings for graduates who received special education was almost \$10,000 less in year six and 14% earned a livable wage, compared to 23% of all degree completers in the cohort.

We found fewer differences between education service groups and the cohort overall for those with no college experience. Whereas the median annual income in year six for those who received special education was \$11,011, median income for all graduates with no college was only slightly higher, at \$13,374. The percent earning a livable wage in year six was also more comparable (9% versus 12%).

It should be noted that students receiving special education services are not monolithic. This status indicates a variety of education-related needs among students, some of which are more relevant to postsecondary outcomes than others. Future research should examine how different learning needs among this group of students are related to college persistence and workforce opportunity.

For details about the data source and methodology [see *Launching into Adulthood Methodology brief*](#).

We are grateful for support from Baltimore’s Promise, which allowed BERC to complete this research.

ⁱ Newman, L., Wagner, M., Knokey, A. M., Marder, C., Nagle, K., Shaver, D., & Wei, X. (2011). The Post-High School Outcomes of Young Adults with Disabilities up to 6 Years after High School: Key Findings from the National Longitudinal Transition Study-2 (NLTS2). NCSER 2011-3004. National Center for Special Education Research.

Launching into Adulthood: Data Sources and Methodology

Rachel E. Durham & Faith Connolly

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This brief provides details about the data source and methodology used in the Launching into Adulthood research series.

Data Sources

This research was conducted using de-identified individual-level data from the Maryland Longitudinal Data System (MLDS) and with the technical support of the MLDS Center Staff. Data were prepared October 2017. The conclusions of this research do not reflect the opinion of the State of Maryland, MLDS Center, the MLDS Governing Board, or its partner agencies.

College Enrollment. MLDS sources of college enrollment data included the Maryland Higher Education Commission (MHEC), and the National Student Clearinghouse (NSC). MHEC provides dates of enrollment and degree completion at institutions of higher education within the state of Maryland. The NSC reports dates of enrollment and degrees completed at postsecondary institutions across the United States. NSC data represent 98% of enrollments at U.S. Title IV-eligible and degree-granting institutions. Enrollments at some types of colleges may be underrepresented in NSC data, particularly small religious schools, arts conservatories, or small specialty colleges.

Employment. The MLDS provided data from the Maryland Department of Licensing and Labor Regulations, specifically, quarterly records of gross wages earned from employers and businesses in Maryland, as well as work study opportunities in college. Full-time and part-time employment intensity is not reported. Wage data do not include military pay, federal employment, self-employment, informal labor, or employment outside Maryland.

Student and School Characteristics. MLDS provided data reported by Baltimore City Public Schools (City Schools) to the Maryland State Department of Education in annual attendance accountability files. All student and school data reflect that recorded in the year of high school completion. Student data points include high school identifiers, diploma date, race, gender, free and reduced-price meal eligibility, and special education service receipt. High school type classifications reflect [City Schools' Choice Guide](#) typology.

Methodology

Analyses employed data pertaining to school year 2008-09 through June 2015.

Fall Enrollment. Fall enrollment status was determined by comparing students' high school graduation date with date of college enrollment. Fall enrollments were defined as enrollment events from July through December of the same calendar year during which high school graduation occurred. Students who graduated from high school outside the typical June graduation window are designated as fall enrollees if they were enrolled in college the next fall, regardless of whether they enrolled in college during an earlier season. Enrollment intensity (full-time, part-time, etc.) is not consistently reported by all colleges, so all enrollment events are treated equally in the analyses.

Degree Completion. Degree completion was determined using college-reported graduation events. Degree type was defined by colleges' reported credential earned, or absent that, they were inferred from level of the institution at which a graduation event was indicated (i.e., community colleges or 4-year degree-granting universities).

Earnings. Median annual earnings after six years are the sum of gross reported wages over the four quarters of the sixth fiscal year after high school graduation. All earnings results exclude individuals with

no salary (i.e., no zero dollar amounts affect median estimates). To account for inflation, all wage dollars were adjusted to 2017 dollars.

Livable Wage. The livable wage threshold refers to an amount estimated to be adequate for one adult with no dependents in the household living in Baltimore city, though this scenario may not be applicable for all City Schools graduates. The livable wage threshold is intended to be representative a locality's basic costs and taxes only. Basic needs are considered to be food, housing, health insurance, transportation, and other basic items. It does *not* account for entertainment, vacations, savings, or capital costs, such as owning a home or retirement. As such, a livable wage is preferable to the federal poverty threshold, but it is still the minimum required for subsistence without social or government assistance (Retrieved from <http://livingwage.mit.edu/counties/24510>).

We are grateful for support from Baltimore's Promise, which allowed BERC to complete this research.