



# **Remediation in Maryland Higher Education**

## **Part 6: Second-Year Retention**

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## REMEDICATION PART 6: SECOND-YEAR RETENTION

A central purpose of remediation at the postsecondary level is to provide students with the foundation necessary to ensure success in college-level coursework.<sup>1</sup> Students prepared to succeed academically might be more likely to return in subsequent years and to continue through to graduation. On the other hand, requiring students to complete remedial courses, which may be non-credit-bearing, may hinder the accumulation of credits necessary for graduation and lead to a decline in student motivation.

### Key Findings:

- Students who were assigned to remedial coursework and *completed* it are retained at nearly identical rates to their peers who entered as “college-ready”.
- At both community colleges and public four-year institutions, students who were assessed to need remediation and did *not* complete it were much less likely to return to college the subsequent fall semester compared to both those who enter the institution college ready and those who needed remediation and completed the course(s).

### Introduction:

Remediation at the postsecondary level has long been of keen interest to educators and policymakers. There is ongoing concern regarding not only the cost to students and institutions, but also *why* students might need additional preparation to enroll in college-level coursework. Stakeholders at the secondary and postsecondary levels have undertaken substantial efforts to address issues related to college preparation in recent years. In Maryland, the College and Career Readiness and College Completion Act of 2013 established standards for all high school students that required them to meet certain benchmarks indicating college readiness prior to graduation. At the institutional level, a number of reforms have taken place as well. There are two particularly prominent interventions underway. First, institutions have increasingly adopted an assessment approach known as “multiple measures.” This incorporates a number of factors such as high school GPA or coursework completed during high school when determining a student’s college readiness, rather than the traditional methods of assessment that focus on a student’s score on a standardized test, such as ACCUPLACER. Second, institutions have increased the usage of co-requisite remediation; these models allow students to take a credit-bearing course in the remedial subject while also receiving the additional supports that may have been traditionally offered in developmental classes. Both

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<sup>1</sup> Remedial courses are courses, typically non-credit-bearing, designed to provide students who are unprepared for college-level work with the academic foundation needed to succeed in college-level, credit-bearing courses. In this series, remedial education and developmental education are used interchangeably. More details on this can be found in earlier reports in the series, located on the MHEC Research webpage: <https://mhec.maryland.gov/publications/Pages/research/index.aspx>

multiple-measures assessment and co-requisite remediation are designed to increase a student's chances of success in completing gateway courses and help them make progress towards earning a degree.

This report is the culmination of a six-part series designed to provide greater insight into remediation at Maryland postsecondary institutions. The report series began with an introduction to the concepts associated with developmental courses and then presented data regarding the assessment status of students within the State. Subsequently, this series has examined both remedial and credit-bearing course-taking and completion, and outcomes including cumulative GPA and credit accumulation within the first year of enrollment. This report – the sixth and final report of the series – will review second-year retention of students by remedial status.<sup>2</sup>

## **METHODOLOGY**

Reports in this series have progressively built upon an initial data set created for Part 2 of the series, beginning with baseline data set for students first enrolling in Fall 2017; this initial data included students' demographic characteristics and information regarding their developmental assessment at the time of enrollments. For Parts 3 and 4 of the series, the data set was expanded to incorporate information regarding course characteristics, course-level enrollment, and course outcomes for both remedial and credit-bearing coursework. This information was used to identify whether a student completed such a course within a given term, and completed a remedial or entry-level credit-bearing course in a specific subject at any time within their first year at the institution. Collectively, these analyses divided students into three groups based upon their developmental status:

- 1) **Remediation Not Needed (RNN)** – this developmental category includes students who were identified as not needing remedial coursework in the given subject (math or English) during the term of entry to the institution or who had no assessment status. These students could be considered “college ready.”
- 2) **Completed Remedial Course (CRC)** – this developmental category includes students who were identified as needing remedial assistance in the given subject at the term of entry and successfully completed at least one developmental course in this subject in the first year, as well as students who were not identified as needing remediation but completed a remedial course in the subject (math or English).<sup>i,ii</sup>
- 3) **Remediation Required – Not Completed (RRNC)** – this developmental category includes students who were assessed to need remediation and failed to

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<sup>2</sup> For additional information regarding the findings of previous parts of this series, see the full reports contained on the MHEC website, or a series summary, contained here: <https://mhec.maryland.gov/publications/Documents/Research/PolicyReports/RemediationSeriesSummary.pdf>

successfully complete a remedial course in the given subject. This includes both students who did not attempt the remedial course and students who enrolled in the course but did not successfully complete it (received a failing grade or withdrew).

In assessing which category a student should be placed, this work relies on a student's placement and completion across both math AND English, meaning that a student assessed to need both math and English developmental coursework would be classified as having completed required remedial coursework only if they completed those courses in both subjects.

To perform the analysis in Part 5 of this series, additional data regarding first-year academic outcomes were added to the data set. Part 6 of the series – this report – further expands the data set to examine retention outcomes, by matching a subsequent term of enrollment information to the earlier data set to examine students' continued participation in higher education. This analysis will focus on student enrollment in Fall 2018 compared to their enrollments in their entry term, Fall 2017.

## **Metrics**

There are a number of ways in which retention can be examined. For purposes of this report, retention is considered as return to any public or state-aided independent higher education institution in the State of Maryland. Among this groups, students are further identified as 1) enrolled at a different institution in Fall 2018 than the one in which they had been enrolled in Fall 2017 (Retained Different Institution), or 2) enrolled at the same institution in Fall 2018 as they had in Fall 2017 (Retained Same Institution).<sup>3</sup> These measures allow standardization across all segments of postsecondary education in Maryland. Using these measures, over four-fifths of first-time, full-time students entering Maryland public colleges and universities in Fall 2017 returned in Fall 2018; however, this statewide figure masks substantial differences across developmental completion groups and across segments.

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<sup>3</sup> Most MHEC reporting defines retention as returning to the same institution, which aligns with the definition of "Retained Same Institution". For purposes of this analysis, "Retained Different Institution" means that a student attended *any* community college, public four-year college or university, or state-aided independent institution in Fall 2018 that was different than the institution that they attended as a first-time, full-time student during the Fall 2017 semester; the Maryland Higher Education Commission (MHEC) does not have the ability to track student enrollment at private or out-of-state institutions. In alignment with other MHEC reporting, students were identified as "returned" regardless of their attendance intensity (full-time or part-time).

## Second-Year Retention Outcomes

### *Community Colleges*

As Table 1 shows, two-thirds of all first-time full-time community college students in Fall 2017 returned to a higher education institution in Maryland in Fall 2018. The vast majority of those students – over 90% - re-enrolled at the same institution. However, this overall high rate of return masks substantial differences across developmental groups.

**Table 1: Second-Year Retention Among Fall 2017 First-Time, Full-Time Maryland Community College Students**

Developmental Status	Total # of Students	Retained Different Institution	Retained Same Institution	Retained Any Institution
<i>All Community College Students</i>	12,248	6.8%	61.8%	68.6%
Remediation not Needed (RNN)	4,880	8.8%	65.7%	74.5%
Completed Remedial Course (CRC)	3,632	6.6%	70.5%	77.1%
Required Remediation – Not Complete (RRNC)	3,736	4.4%	48.2%	52.6%

As these data show, the rates of retention among those students who entered college-ready (RNN) and those who completed remedial coursework (CRC) are nearly even, with 74.5% of RNN and 77.1% of CRC students returning for the Fall 2018 term. Those students who entered as college ready (RNN) were slightly more likely to attend a different institution than their counterparts who had required and completed remedial courses.

In contrast to the similarities among RNN and CRC students in second-year retention rates, those students who needed remedial coursework and did not complete it (RRNC) returned for a second year at much lower rates. Fewer than half returned to the same community college at which they enrolled in Fall 2017, and just over half returned to any public or independent postsecondary institution in the state.<sup>4</sup>

### *Four-Year Public Colleges and Universities*

Overall, students at four-year public colleges and universities were much more likely to return for a second year than students at community colleges, with nearly nine out of ten students re-enrolling in a Maryland postsecondary institution (see Table 2). Despite overall higher retention rates, major across-group differences remain.

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<sup>4</sup> Note that this is not necessarily indicative of a student dropping out of higher education altogether – as previously noted, MHEC does not have the ability to track enrollment activity at in-state, non-state-aided private postsecondary institutions or enrollment at out-of-state institutions operating in Maryland (e.g., Strayer University or Webster University). Additionally, this analysis relies specifically on fall-to-fall retention – a student who does not return in the immediate fall term may return at a later date.

**Table 2: Second-Year Retention Among Fall 2017 First-Time, Full-Time Maryland Four-Year Public College and University Students**

Developmental Status	Total # of Students	Retained Different Institution	Retained Same Institution	Retained Any Institution
<i>All Public Four-Year Students</i>	14,227	4.8%	85.1%	89.9%
Remediation not Needed (RNN)	11,797	4.0%	88.1%	92.1%
Completed Remedial Course (CRC)	1,454	8.3%	77.9%	86.2%
Required Remediation – Not Complete (RRNC)	976	9.0%	60.3%	69.3%

Similar to community college students, students entering as college-ready (RNN) and those who needed remediation and completed it (CRC) were retained at roughly similar – and very high – rates. However, fewer than three-quarters of students who required remediation and did not complete it (RRNC) returned for a second year.

#### *Continuous Enrollment*

Part 5 of this series provides some initial insight into the gap in retention rates across developmental completion groups. In particular, this analysis showed that students who required remediation and did not complete were much more likely to have the fall term as their final term of enrollment within their first year – e.g., they did not return for a subsequent term following their initial enrollment in the fall.<sup>5</sup> Students who did not return for the spring semester in most cases did not re-enroll in the following fall.

Among community college students, the vast majority (86.2%) of students who did not enroll in a second term did not return for the next fall. On the other hand, students who were retained into either the spring (76.6%) or summer (89.1%) were much more likely to return for courses the next fall. Similarly, students at public four-year colleges and universities; 57.8% of students whose last term was the fall semester did not return for a second year.

## **DISCUSSION**

The data above show that there are large differences in rates of retention across developmental groups. As Part 5 speculated, one possible driver of these patterns of enrollment may have been the fact that academic performance within the first year (as defined by credit attainment and GPA) was substantially lower for those students who were assigned to remedial coursework and failed to complete it. There is also another potential explanation: that failing to take and complete remedial coursework is related to lower motivation to persevere in postsecondary education. One of the primary reasons for including first-year GPA in the analysis of first-year outcomes is that, in addition to

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<sup>5</sup> For additional discussion regarding fall-to-spring/summer retention, see Part 5 of this series.

serving as a foundation for subsequent academic success, it is frequently considered an indicator of student engagement and motivation.

## CONCLUSION

Data show that, similar to other measures of student success, there are substantial differences in rates of second-year retention across developmental groups. Students who were assessed to need remediation and did not complete it were much less likely to return for a second-year than their peers who entered as college-ready or those who completed required remedial coursework. On the other hand, despite concerns that requiring students to complete remedial coursework may represent a barrier to student success, students who *do* complete it are as likely to return as their peers who did not need to complete such courses.

This report concludes the Research series. A summation of the entire series, as well as policy recommendations tied to the series, can be found on the MHEC Research webpage.

## RECOMMENDATIONS FOR POLICY AND PRACTICE

- *Institutions should continue the development and implementation of targeted curricular interventions to reach students who require remedial work and fail to complete it in the first year.* Previous work in this series has shown that key indicators of first-year academic performance, first-year GPA and the percentage of students meeting full-time credit thresholds (e.g., 12 to 15 credits), are also much lower for students who do not complete required remedial courses. Students who do not complete required remedial courses are less likely to persist into a second-year than their counterparts who enter as college-ready or those who complete remedial courses.
- *Institutions should seek out non-curricular ways to address these retention challenges.* There may be factors other than deficiencies in academic preparation (e.g., lack of social engagement, lack of motivation) that contribute to both the failure to take courses and the failure to return to the institution. Strategies such as intrusive advising or near-completer initiatives may also help address these retention challenges for students needing remediation.
- *Early interventions matter.* Using tactics such as intrusive advising can help ensure that students stay on track in the crucial first term. Research in this series has shown that students who needed remediation and didn't take the courses in their first term were unlikely to re-enroll in the spring. This report shows that students who need remediation and don't take it face continued persistence challenges into the second year.

- *Accurate placement in remedial courses is critical to encouraging student motivation and best utilized limited institutional resources.* If students are inaccurately identified as needing remediation, they may be set on a path that discourages them from returning to college for a second year. Additionally, institutional resources are best utilized when targeting students who are most in need of remedial interventions receive them.

## **APPENDIX: DATA LIMITATIONS**

As has been noted throughout this series, there are a number of limitations inherent to using these data for analysis. They are detailed below:

- 1) **The analytic data file is complex and may have missing data** - These analyses rely on several different data sets. Identifying students' enrollment in and completion of remedial and associated credit-bearing coursework, as well as the demographics of the student population, required a match across course information data, student registration data, and enrollment and demographic data.<sup>iii</sup> In the course of developing the datasets for prior analyses, any records missing student registration information, course information, or enrollment demographic information were removed from the analysis.<sup>iv</sup>
- 2) **Matching student records across data sets is challenging**- The analysis contained in this Part of the series is likely more susceptible to problems related to the matching of records across data sets than earlier in the series. The analysis contained in this Part of the series relies upon consistent and accurate use of the unique identifier institutions report in their Enrollment Information System submissions. Given that this unique identifier is what provides MHEC with the ability to match students across terms and institutions, inconsistent reporting might result in a lack of matching, and a failure to appropriately match students. While previous analyses were driven by consistent records *within* institutions, the analysis contained within this addition to the series is driven by the match *across* institutions, making the consistent use of this identifier considerably more important.
- 3) **MHEC cannot study student transfer out of state** – MHEC is only able to track students attending a Maryland community college, public four-year college or university, or state-aided independent institution. Students who transfer to other private institution or to a college or university cannot be identified for purposes of this study. Due to this, students may erroneously be identified as not retained, when in fact they may have continued their enrollment at one of these institutions.

- 4) **The complexity of students' path through remediation is hard to capture in MHEC data** – remedial status of students is based upon institutional reporting. As was also discussed in prior reports, student records provided by the institution indicate whether a student has been assessed to need remediation in a given subject. However, these records do not provide more detailed information regarding the extent to which a student is assessed to need remediation. Some students may be assessed to require multiple remedial courses within the same subject area, such as a sequence of remedial math courses. Thus, while this analysis can identify those students who enrolled in and completed remedial coursework within a subject area, it cannot identify whether a student completed the full sequence of required developmental courses. This may then overstate the degree to which students who were assessed to need remediation completed it.
  
- 5) **Data only reflect assessment for remediation for student's first term of enrollment.** All information regarding assessment is based upon the initial term of enrollment. It is possible that some students would lack a remedial assessment value during the fall semester but be assessed either later in the term or at another subsequent time. Some institutions also give students the ability to challenge their initial assessment by re-testing. A student challenging their score might initially be identified as needing remediation but then not be required to take it. At the individual student level, then, it is possible that there might be a small degree of understatement or overstatement of the need for remediation, which cannot be identified via available data.
  
- 6) **Institutions' implementation of corequisite remediation may not be captured in the MHEC data** - The growing implementation of co-requisite remediation, as discussed earlier in this report, also poses significant challenges in reporting, particularly at a statewide level. Utilizing a co-requisite remediation model means that institutions must define both what college-ready is and whether courses should be considered as developmental or college-level. While co-requisite courses have a remedial component, a student who successfully completes one of these courses is awarded college credit for their course. Thus, a student may be identified as needing remediation and not completing it, though this would be a reflection of the fact that they enrolled directly in a credit-bearing course. As institutions may interpret these situations differently, the comparability of these data by institution may be somewhat constrained.

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<sup>i</sup> As noted in the introduction to this brief, MHEC does not capture data regarding the extent of a student's remedial needs. For example, a student requiring more than one remedial course in a given subject would be identified as a Developmental Completer for that subject even though they had not completed the entire remedial sequence to which they were assigned.

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<sup>ii</sup> A small portion of students enrolled in remedial courses while either lacking an assessment status or being identified as college ready. This may be the result of a number of factors, such as a student who had no assessment status during the initial term of enrollment but was later assessed.

<sup>iii</sup> A unique student identifier was used to match demographic data contained in an enrollment file to student course registrations. This file was then matched to another file holding detailed course information.

<sup>iv</sup> This particularly affects students at Morgan State University, which is missing course information for all semesters included in this study.