College and Career – Are Maryland Students Ready?

Presentation to the

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and the

House Education and Economic Development Subcommittee

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College and Career – Are Maryland Students Ready?

Overview

While *Maryland Ready*, the 2013 through 2017 Maryland Plan for Postsecondary Education makes "Access, Affordability and Completion" a central goal of the State, many new college students are not ready to begin college-level classes. This mismatch in abilities and expectations requires higher education institutions to expend limited funding to get students, who may be recent high school graduates or returning adults, college ready. Why this problem exists, how it can be measured, and what is being done about it are very large questions that are being grappled with across the country and in Maryland. This paper can only highlight available data from several State agencies and draw attention to a few of the notable efforts being made to address remedial, sometimes called developmental, education. This policy paper will evaluate four broad questions the General Assembly should ask about remedial education including:

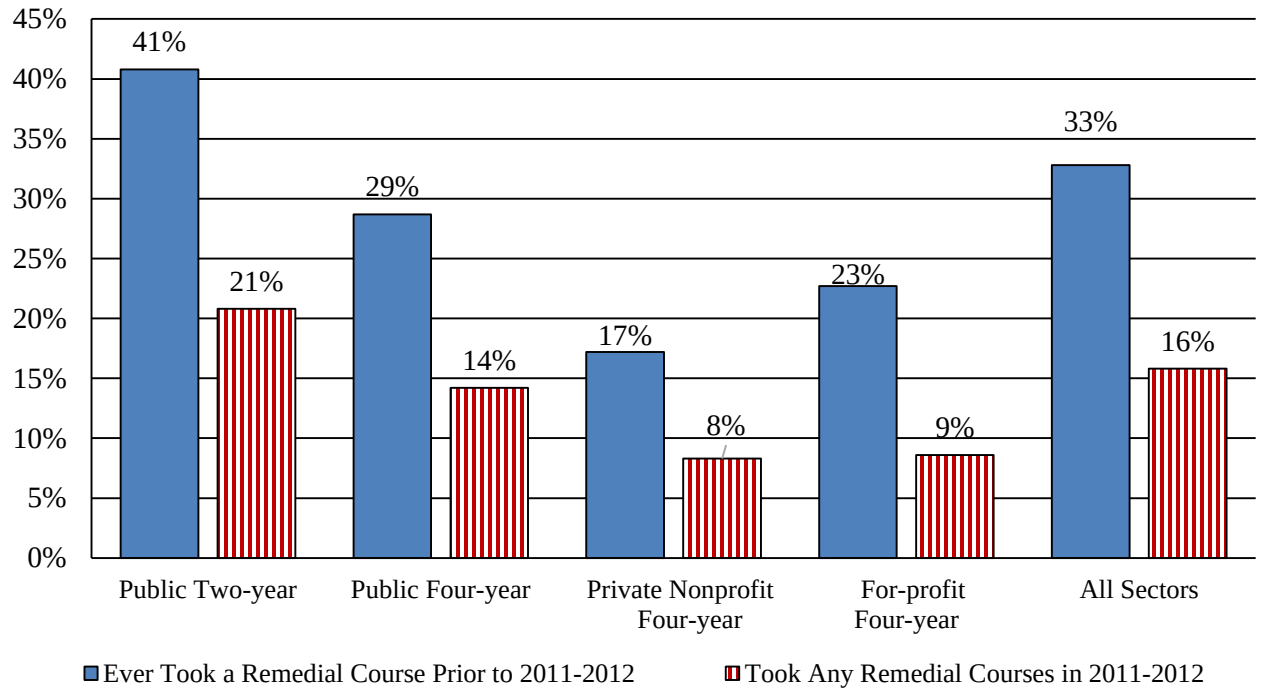
- Why is there a high need for remediation in Maryland?
- Why are remedial education outcomes frequently mixed or poor?
- What are the financial considerations for remedial education?
- What is being done about remedial education in Maryland and other states?

Concerns surrounding the rate of remedial education necessary for new and returning students date back decades. A fiscal 1996 *Joint Chairmen's Report* (JCR) from the Maryland Higher Education Commission (MHEC) applies equally well to conditions nearly 20 years later:

> The problem of academically underprepared students entering college is so extensive that most public postsecondary institutions offer remedial and developmental programs. The availability of these programs at both two- and four-year institutions raises serious policy questions related to the role and mission of campuses, the cost of higher education, funding, academic standards, access and educational opportunity, graduation and retention rates, and workforce preparation.

Addressing these issues is an ongoing, long-term effort for the State and the actors responsible for connecting the education segments. **Exhibit 1** shows the scope of this challenge at the national level using course enrollment data from the National Center for Education Statistics (NCES). In the 2011-2012 academic year, one-third of all students in higher education had taken a remedial course. Across 51 categories measured for remediation in the NCES report, the single highest rate was for community college students, at just over 40%. While the public sectors

Exhibit 1
National Remediation Data by Sector
2011-2012 Academic Year



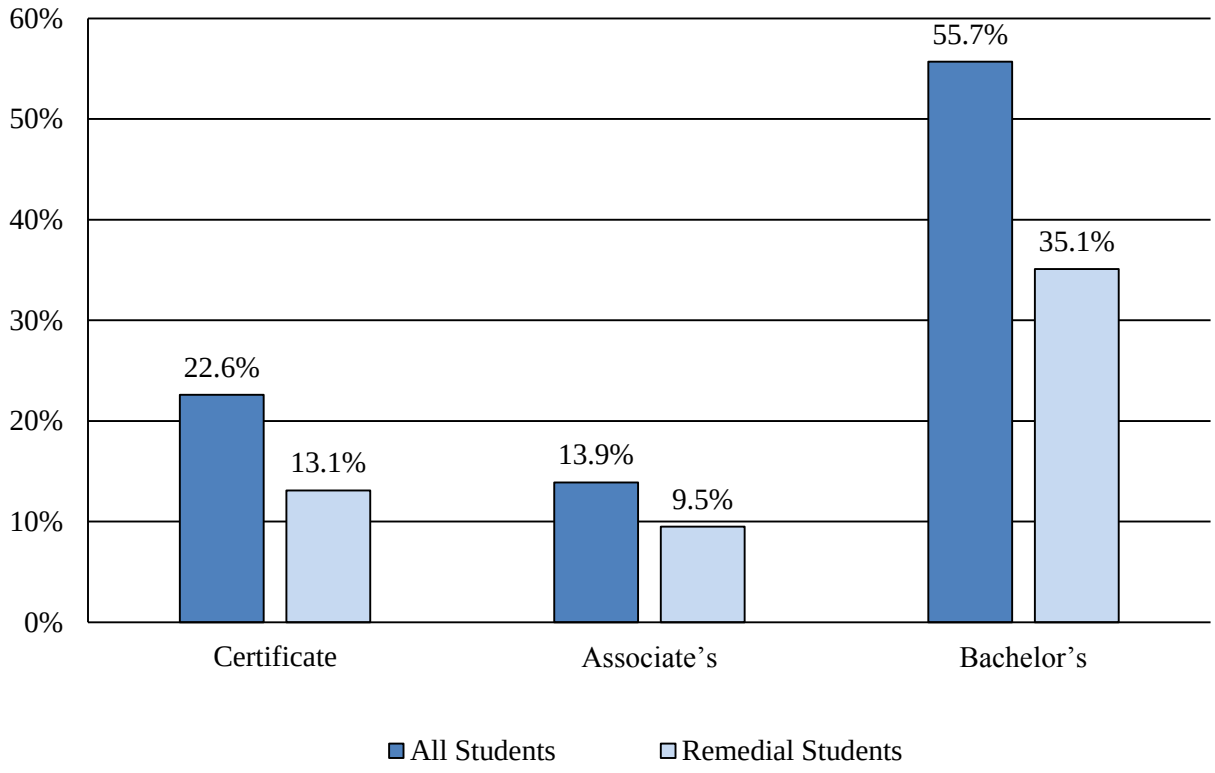
Note: The All Sectors category includes some sectors not shown in this exhibit.

Source: National Center for Education Statistics, Web Tables 2011-2012

have higher rates of need than the private sectors, it is worth noting that nonprofit and for-profit institutions also face issues of college readiness. NCES notes that even institutions with highly selective admissions have remediation rates of 13%.

Exhibit 2 shows national graduation rates for remedial students and all students by degree program. This uses the federal guideline of reporting a student as graduated if the student finishes in no more than 150% of the time necessary to graduate, so for a one-year certificate, it would be 1.5 years, or 3 semesters. Overall, the two-year sector has a similar rate for remedial students and all students, while four-year institutions have a 20 percentage point difference. This means remedial students are more likely to perform similarly to all students in a community college, rather than a four-year institution, suggesting community colleges are better at remediation. However, in all three degree levels, remedial students graduate at lower rates.

Exhibit 2
National Graduation Rates of Remedial Students and All Students
By Degree Type
Fiscal 2012

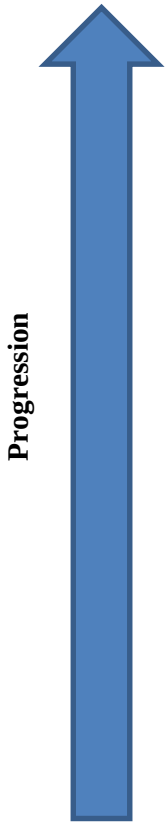


Source: National Center for Education Statistics, *Web Tables 2011-2012*

What Does It Mean to Be College Ready?

Generally speaking, a college-ready student has a reasonable expectation of passing an introductory, or gateway, credit-bearing college course. While a D grade is technically passing, a C grade is usually required for a student to earn credit toward an undergraduate credential. **Exhibit 3** shows a common method for organizing education coursework by degree progression level using Coppin State University's (CSU) math department as an example. A "ready" student could begin with Math 110, while a student with academic deficiencies would start in a developmental class such as Math 097, which is noncredit. The ability of a student to pass a developmental class and then to enroll in and succeed in the gateway course is called the *throughput completion rate*.

Exhibit 3
Levels of Coursework in Mathematics



Level	Example	Credits	Abbreviated Course Descriptions
Advanced	MATH 309 Calculus III	4	This course covers the vectors in several dimensions change of coordinates to, polar, cylindrical and spherical and coordinates, along with the Calculus involved.
Intermediate	MATH 211 Discrete Mathematics I	3	This course is intended to provide the student with an introduction to those areas of math which are of practical use in the field of computer science: logic and proofs; binary and hexadecimal systems; sets functions and relations; algorithms and combinatorics.
Gateway	MATH 110 College Algebra: Concepts and Applications	3	This course contains the Cartesian plane and graphs of equations; linear modeling, using a graphing calculator, functions and graphs of functions, systems of equations and inequalities.
Developmental	MATH 097 Elementary Algebra	5*	Operations with whole numbers, integers, fractions, decimals, percents, rational numbers and real numbers; scientific notation; operations with algebraic expressions, integral components, equations, and inequalities.
High School	Public High Schools		
Adult Basic Education (ABE)	ABE Programs at Community Colleges		
English for Speakers of Other Languages (ESOL)	ESOL programs at community colleges		

*These credits do not actually count toward degree completion but are used to calculate tuition.

Source: Coppin State University's Online Course Catalog; Department of Legislative Services

Placement Testing in Maryland

When students enroll in a college or university, they typically will be given a placement test to determine at what course level the student should be placed. There are, however, differences in the test used and in the cutoff scores used for placement decisions.

Upon enrolling at a community college, most students are required to take a placement test to determine the appropriate math and English classes to take in the first semester of studies. The most widely available course placement examination used at State community colleges is Accuplacer from the College Board. The other test, which is used by some institutions in Maryland although the test is not widely used, is Compass by American College Testing (ACT). Both tests are computer-adaptive and have no cost for students but do have a licensing cost to the institution.

Accuplacer is an untimed multiple-choice test with English and math components. The first part consists of 20 questions on sentence skills, 20 questions on reading comprehension, and an optional written portion where students write up to 600 words to respond to an essay prompt. The second part is made up of 17 questions on arithmetic and 20 questions on college-level math. There are also tests for English as a Second Language (ESL) students. Unless stated otherwise, the discussion in this paper excludes ESL students, as they are a distinct remedial population, and Maryland provides separate funding and programs for ESL students. Preparation material is available for Accuplacer, although not all institutions encourage students to study before taking the placement test. The final score is on a range from 0-120 for the computerized tests and 1-8 for the essay.

Maryland's community colleges have adopted common placement cutoff scores for college readiness. This dates back to 1993, when the Maryland Community College Council of Instructional Deans (MCCCID) developed uniform standards for assessment and placement of students into remedial or credit-bearing coursework to make transferring between institutions simpler and also make data comparisons more meaningful.

MCCCID found that the assessment instruments (placement exams) must be standardized, as well as the grading of writing samples. A cutoff score was agreed upon, so that any student who scores below a 70 on the Accuplacer Mathematics Placement Test is placed in a remedial course, for example. The standards for who needs to be tested are also uniform. Only students with a score of 550 or higher out of 1600 on the Scholastic Aptitude Test (SAT) or 21 or higher on the ACT may be exempt. A student's high school grade point average is not a factor. Community colleges began testing this policy in fall 1998 and fully implemented it the following year.

Exhibit 4 shows the outcomes of placement exams for first-time students at Hagerstown Community College for the past two completed academic years. Students can test into three levels of remediation or the gateway course. As expected, given the community college sector's remediation rate in Exhibit 1, first-time students at Hagerstown Community College have a high need for remediation and, like most other institutions, the need skews higher for math than English, although many students need both subjects. Only 12% of students tested into gateway math, while 29% of students made it to gateway English. Overall, only 7% of incoming students were tested as college ready in both subjects.

Exhibit 4
Placement Exam Results from Hagerstown Community College
2012-2013 to 2013-2014 Academic Years

		Math Remediation					
		No Math	Level 1	Level 2	Level 3	Gateway	Total
English Remediation	No English	*	2%	6%	2%	3%	14%
	Level 1	1%	4%	4%	0%	0%	10%
	Level 2	4%	9%	15%	2%	1%	31%
	Level 3	1%	4%	8%	1%	1%	15%
	Gateway	5%	3%	12%	4%	7%	29%
	Total	**12%**	**21%**	**46%**	**9%**	**12%**	**100%**

Students: 5,418

*This box represents students who did not take the placement exam at all.

Source: Hagerstown Community College

The public four-year sector has no standardization of placement tests or cutoff scores, so a student could end up in a remedial class on one campus, but in a gateway class at another. It is not clear if this affects enrollment decisions of students, but given the poor outcomes of remedial classes, as will be shown, it does raise questions about which path is more likely to lead to degree attainment for the student.

The Secretary, Chancellor, and Presidents should comment on whether it would help students if public four-year institutions standardized placement cut scores. They should also comment on appropriate cut scores as misaligned cut scores may place more students in remediation education than necessary.

Measuring Remediation and the Student Outcome and Achievement Report

While these placement tests assess knowledge and problem-solving abilities, the next step is to understand the remediation rates generated from these tests. The need for remedial education is measured by the remediation rate, or the percentage of students who enter college without the necessary reading, writing, or math skills to study alongside their peers. This rate is expected to increase as the number of Maryland residents in historically underserved populations continues to rise in both the kindergarten through grade 12 (K-12) system and the population of adult residents.

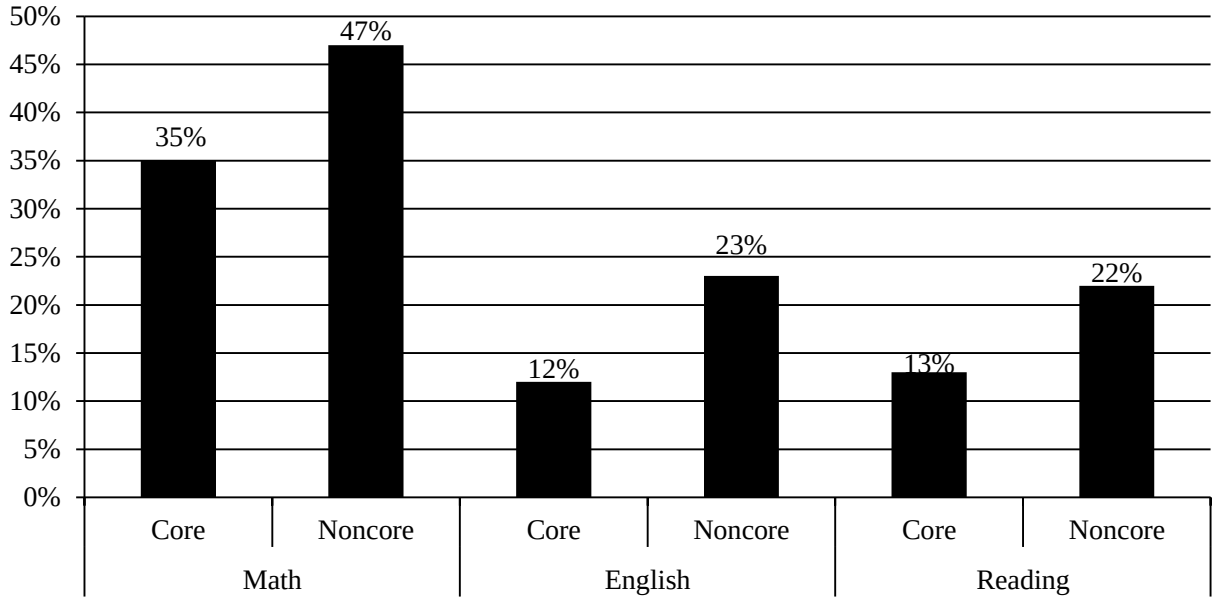
Broadly, there are two types of students in higher education who need remedial education. First, adults or returning adults who have never enrolled in higher education or who may have not completed a degree. Being out of the classroom for many years, many adults do not meet math requirements. Second, there are students who, despite recently graduating high school, do not meet college requirements when tested. Originally, young adults not ready for collegiate studies would enter a preparatory institution. In the 1930s, these were largely replaced by public two-year junior colleges, now called community colleges. Age is important. The NCES study mentioned earlier found that while students 18 years old or younger had remediation rates of about 25%, for students 19 to 23 years old, it was 32%, and for older students, rates are between 35% and 38%.

Remediation can take several forms: from testing to determine where the gaps are; modifying curriculum; providing tutoring and other support services; and evaluating success upon completion of remedial work. Remedial education at the college level is considered an inefficient use of college and student resources since the skills being developed should have been learned earlier in the educational process. Additionally, remedial courses are noncredit-bearing and do not count toward a certificate or degree. However, students are required to pay full tuition for the courses as if taking credit-bearing coursework. Implications for using financial aid for remedial courses will be discussed later in this paper.

In 1988, these concerns led the General Assembly to pass legislation requiring MHEC to improve the information that was provided to high schools and local education agencies (LEA) regarding the performance of their graduates at the college level. As a result, MHEC established the Student Outcome and Achievement Report (SOAR), which examines the academic performance of recent Maryland high school graduates during their first year of study at a Maryland higher education institution. The SOAR compares the students who completed a college preparatory course of study in high school (core) to the students who did not complete a college preparatory curriculum (noncore). With few exceptions, and as expected, the core students performed better than the noncore students regardless of race, gender, the county in which they attended high school, or the specific higher education institution they attended.

The SOAR provides remediation rates for students in three key subject areas: math, English, and reading. As shown in **Exhibit 5**, of the students who graduated from a Maryland high school in the 2007-2008 school year and who also enrolled at a Maryland college during the 2008-2009 academic year, the highest percentage (47%) of remediation was for noncore students in math, and the lowest percentage (12%) of remediation was for core students in English. SOAR no longer collects data on core and noncore students since all high school degree bound students must take a core set of courses, the Maryland College- and Career-Ready Standards.

Exhibit 5
Percent of Core and Noncore Curriculum Maryland Students Needing Remediation in College
2008-2009 Academic Year



Note: The exhibit includes only students who graduated from a Maryland high school in the 2007-2008 school year and who also enrolled at a Maryland college during the 2008-2009 academic year.

Source: Maryland Higher Education Commission, *Student Outcome and Achievement Report* June 2011

Consistent with the national trend, Maryland SOAR data consistently shows that more students (both core and noncore) require remediation in math than in English or reading. Additionally, the percentage of students requiring remediation in math has been steadily increasing. Using the most recent data trend available for Maryland students, during the 12-year period from the 1997-1998 academic year to the 2008-2009 academic year, the proportion of core students who required math remediation increased by 12 percentage points, growing from 23% to 35%. The proportion of noncore students requiring math remediation increased by almost the same amount, growing from 36% to 47%.

Conversely, the percentage of Maryland students who required remediation in English and reading remained stable or decreased slightly over the same time period. In the 1997-1998 academic year, 12% of core students and 22% of noncore students needed remediation in English. By the 2008-2009 academic year, the proportion of core students who required remedial assistance in English remained at 12%, and the proportion of noncore students who required remedial assistance in English increased by just 1 percentage point to 23%. Similarly, over the same time period, the proportion of students requiring remediation in reading decreased from 14% to 13% for core students and from 24% to 22% for noncore students.

MHEC also reports remediation rates in its annual *Data Book*. Up through the 2010 *Data Book*, remediation rates were collected and reported using the distinction of core and noncore students by math, English, and reading. However, since data for core and noncore students is no longer collected, beginning with the 2011 *Data Book*, the data on remediation rates is shown by the percentage of recent high school graduates enrolled in a Maryland public institution of higher education who are assessed to need remediation or are enrolled in a remedial course. This data is shown by institution and by place of residence. In the 2014 *Data Book*, which shows remediation rates for students enrolled during the 2010-2011 academic year, the statewide remediation rate for students at all Maryland public institutions was 55.1%. The rate has hovered around this same percentage since the reporting method changed in the 2011 *Data Book*: 54.3% for the 2007-2008 academic year; 54.7% for the 2008-2009 academic year; and 57.5% for the 2009-2010 academic year.

Exhibit 6 shows the remediation rates in the 2010-2011 academic year for Maryland high school students who graduated in the previous school year by county. Overall, the highest remediation rates are in Baltimore City, Garrett County, and Washington County, all over 70%. Only 7 of the 24 counties have rates below 50%, with Calvert County having the lowest rate of 34.5%. Montgomery County, the largest school district, has a lower remediation rate of 44.2% but still produces the second most remedial students. The three largest counties by high school population produce just over 40% of all remedial students.

Redesigning the SOAR

Until recently, the SOAR was published biennially; however, the most recent edition of the SOAR was in June 2011 because MHEC is redesigning this report in 2015. This is necessary for several reasons. First, data for core and noncore students is no longer collected. Second, the scope of the data collected and reported through the SOAR is very limited. The SOAR collects information only on Maryland high school graduates who went on to enroll at a Maryland college in either the fall or the spring immediately following their high school graduation; therefore, the report excludes some students who might traditionally need remedial assistance, such as adult learners who enroll in college several years after graduating from high school.

Another limitation of the SOAR is that only students who take the SAT or ACT are included in the report. The data reported in the June 2011 SOAR was based on only the 32% of all public high school graduates who happened to take the SAT or ACT and enrolled in college in Maryland. In addition, of the students who were included in the report, all credit enrollments were captured; therefore, students who enrolled in only one or two credit classes were included along with students who were enrolled full-time. As will be discussed further, a new, thorough remediation report will greatly improve the measurement of current remediation needs in Maryland.

The Secretary should comment on progress toward publishing the revised SOAR in 2015.

Exhibit 6
Remediation Rates of Maryland High School Graduates Enrolled in a Public Institution of Higher Education by Residence
Fiscal 2011

	Remediation Rate	Number of Remedial Students
Allegany County	56.5%	208
Anne Arundel County	52.7%	1,677
Baltimore City	76.1%	1,566
Baltimore County	58.7%	2,454
Calvert County	34.5%	223
Caroline County	63.3%	105
Carroll County	60.6%	688
Cecil County	62.4%	302
Charles County	50.8%	490
Dorchester County	67.3%	101
Frederick County	44.4%	721
Garrett County	72.6%	127
Harford County	49.8%	834
Howard County	37.2%	743
Kent County	65.4%	34
Montgomery County	44.2%	2,400
Prince George's County	66.7%	2,375
Queen Anne's County	46.5%	139
St. Mary's County	36.1%	200
Somerset County	62.8%	59
Talbot County	60.8%	107
Washington County	70.3%	521
Wicomico County	66.1%	362
Worcester County	60.4%	177
State Total	**54.4%**	**16,613**

Source: Maryland Higher Education Commission

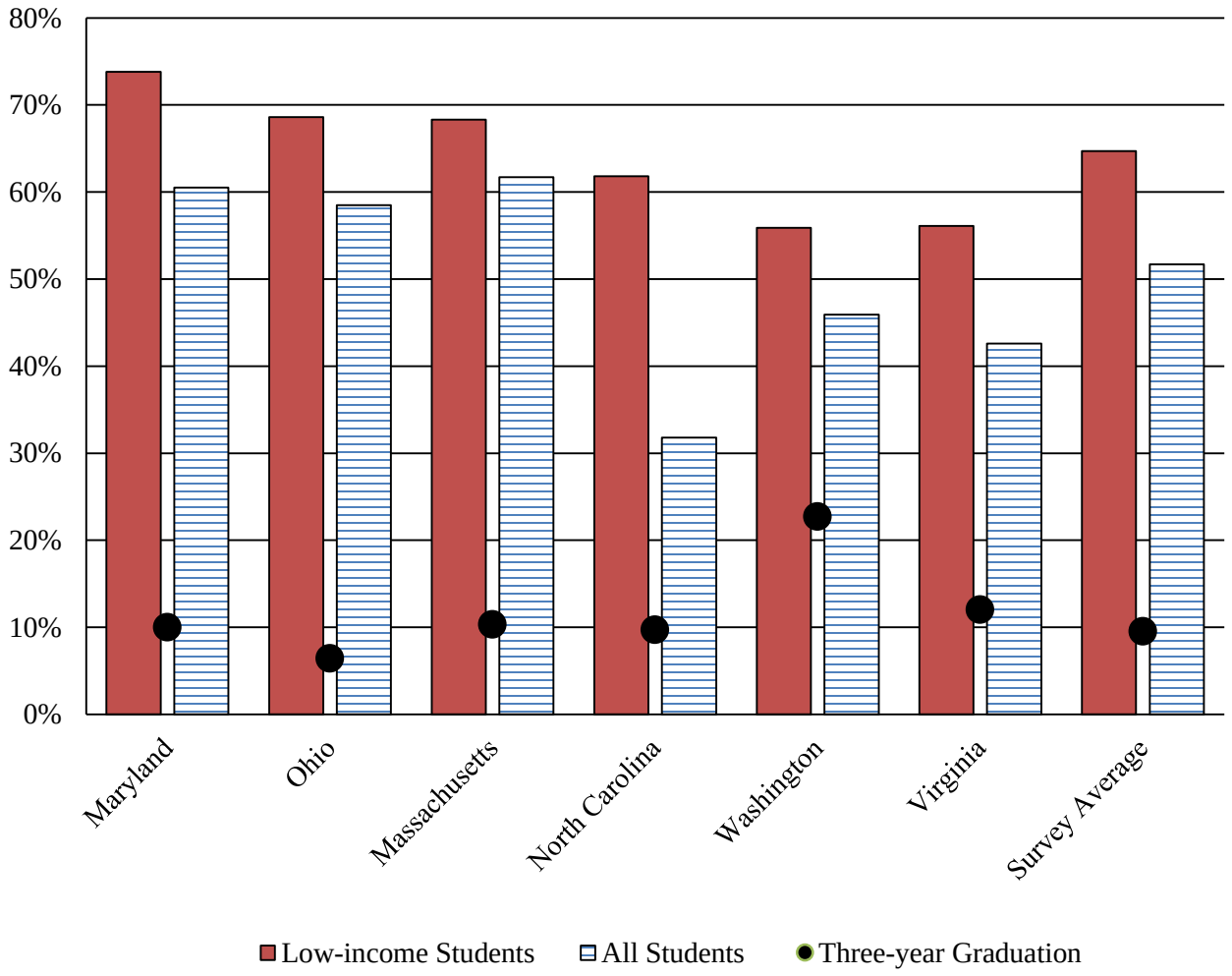
Maryland is not unique in its challenge to measure remediation. In a June 2014 publication entitled *Remedial Reporting Chaos*, the Education Commission of the States (ECS) found comparisons between states very difficult. The first reason, as stated before, is that there is no standard definition or measurement for remedial needs. While most states use either placement

test scores or remedial enrollment, the lack of a single federal definition hinders comparisons between states (despite some limited national data, as shown in Exhibit 1). The second is that several states, including competitor states New Jersey and Pennsylvania, do not report remediation data in any form. Out of the Maryland Model's 10 competitor states, 7 prepare annual reports. While ECS counted the suspended SOAR as an annual report for Maryland, it was not considered as robust or informative as other states' regular reporting. Out of all 50 states, only 14 currently monitor remedial course completion on a state-level and only 4 actively track remedial education spending.

Due to these reporting challenges, Complete College America (CCA) conducted a thorough survey of states to determine national remediation needs. Maryland participated. While it is limited to only the fall 2006 cohort, this survey is one of the few comparisons available to evaluate Maryland against other states. **Exhibit 7** shows the remediation rates for all students enrolled at public two-year institutions, as well as the remediation rate for low-income students and the graduation rate for all students. Competitor states for which data is available are shown, along with the average of all 35 states in the survey. Overall, Maryland has the second highest remediation need and the highest remediation need for low-income students. With the exception of Washington, the standard three-year graduation rate used for community colleges is uniformly low, around 10%.

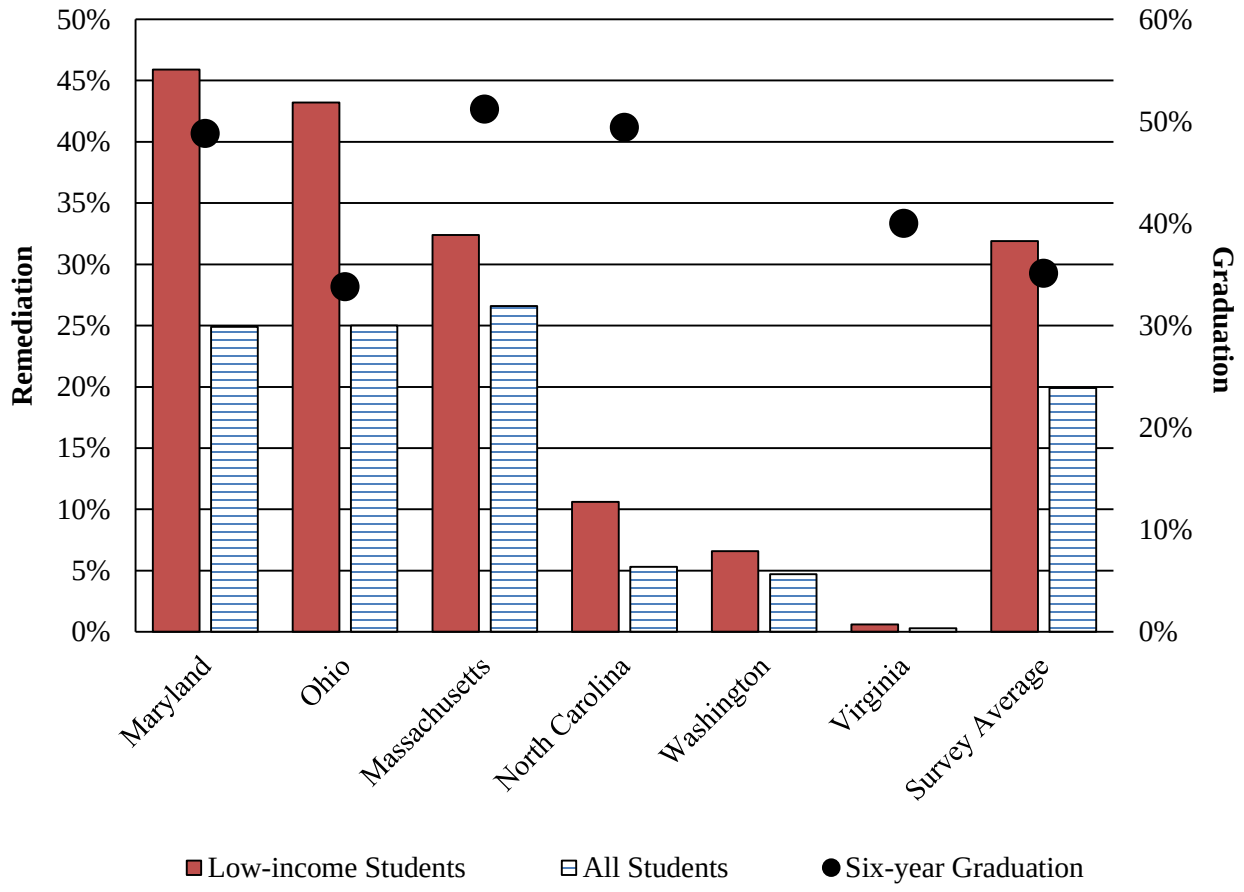
Exhibit 8 shows the same data for public four-year institutions. Exhibit 8 shows Maryland is tied for second place with Ohio for overall remediation rates, and again has the highest rate for low-income students. While Maryland's need is similar to Ohio's, its six-year graduation rate is substantially higher at 48.8% versus 38.8% for Ohio. It is interesting to see that North Carolina, Virginia, and Washington have very low remediation rates at their four-year institutions. In Virginia, this is because four-year institutions are not allowed to teach remedial education. Ohio switched to this policy in 2014. The national rates for remediation are lower than Maryland, but Maryland does achieve a higher graduation rate, indicating some Maryland institutions may be more successful than in other states.

Exhibit 7
Remediation and Graduation Rates at Community Colleges
Maryland and Select Competitor States
Fall 2006 Cohort



Source: Complete College America, *Remediation: Higher Education's Bridge to Nowhere*

Exhibit 8
Remediation and Graduation Rates at Public Four-year Institutions
Maryland and Select Competitor States
Fall 2006 Cohort



Note: Washington's six-year graduation rate was not reported.

Source: Complete College America, *Remediation: Higher Education's Bridge to Nowhere*

Remedial Education at Public Four-year Institutions

Practices and instances of remedial education vary widely among public four-year institutions of higher education. Each campus sets its own standards for placing students in remedial courses, and the institutions use a variety of measures to determine college readiness including Accuplacer, ACT, SAT, AP, and tests developed by the institution, such as the University of Maryland, College Park's (UMCP) Maryland Early Math Placement Test

(known as MARY/EMPT). Standards to determine whether placement testing is necessary also differ. For example, students at CSU with a math SAT score of 470 are considered ready for credit-bearing coursework, while students at the UMCP must score at least a 600. As a result, the variation in remediation rates at public four-year institutions may not only be a result of the students that enroll at each institution but also of each institution's college-ready standard.

Two public Maryland undergraduate four-year institutions do not offer remedial coursework: St. Mary's College of Maryland (SMCM) and Salisbury University (SU). SMCM is designated as the public honors college for Maryland and, as such, its incoming students generally have strong academic qualifications. Out of SMCM's entering class in fall 2013, about 160 students took calculus, 140 took a survey of math, 100 took computer science, and only 30 took precalculus. Fewer than 30 students opted to take a concurrent English class during the first semester to improve writing skills. SU does manage a bridge program wherein students who just miss the general admissions cutoff may room and board on campus but receive mandatory instruction from a Wor-Wic Community College professor on SU's campus in general studies. SU does not consider this remedial education. Both schools participate in redesign of gateway coursework, which benefits many undergraduate students, but neither campus anticipates adding remedial education in the foreseeable future.

Due to the limitations of MHEC's remediation reporting data discussed above, it is worth comparing SOAR's results to another source of remediation rate data. The alternative data was collected for a CCA survey based on students enrolled in remedial education courses at public four-year institutions and community colleges. The data includes all first-time students enrolled in a remedial course, which includes first-time students at any age and any residency, *i.e.*, out of state. The other source is MHEC's high school graduate system, which is used in MHEC's annual *Data Book*. This is what would otherwise be the SOAR data had SOAR not been discontinued. The MHEC data is the number of students assessed to need remediation (or whose assessment status is unknown but enrolled in remedial coursework). This includes only students who graduated from a Maryland high school the year prior to enrolling in a Maryland institution.

Exhibit 9 shows the percentage of first-time students who enrolled in remedial courses at the public four-year institutions in Maryland in the 2010-2011 academic year. Using the CCA data, the percentage of students enrolling in remedial courses ranges from a high of 92.8% at Bowie State University to a low of 1.4% at the University of Maryland Baltimore County. However, when comparing the self-reported CCA data to the MHEC system data, there are large discrepancies that may not be explained by the difference between assessed remediation and remediation course enrollment. For example, the *Data Book* records University of Baltimore as having no remedial education, yet CCA shows it at nearly 80.0%. Likewise Frostburg State University and the University of Maryland Eastern Shore are both about 20 percentage points higher in the survey than the regular MHEC report. This highlights the difficulty in determining remedial needs, when different measurements from the same year can have very different results. The exhibit shows only first-time students' rates, so the actual remediation rate with returning adult students is likely higher.

Exhibit 9
Students Enrolling in Remedial Courses at Public Four-year Institutions
2010-2011 Academic Year

	MHEC *Data Book*	CCA Survey	Difference of *Data Book* to Survey
Bowie State University	87.9%	92.8%	-4.9%
Coppin State University	75.9%	71.0%	4.9%
Frostburg State University	19.5%	40.8%	-21.3%
Towson University	20.0%	18.7%	1.3%
University of Baltimore	0.0%	78.9%	-78.9%
University of Maryland Baltimore County	13.9%	1.4%	12.5%
University of Maryland, College Park	3.1%	3.0%	0.1%
University of Maryland Eastern Shore	70.4%	90.2%	-19.8%
Morgan State University	73.7%	79.1%	-5.4%
Four-year Average	**26.9%**		
HBCU Average	77.0%		
TWI Average	11.2%		

CCA: Complete College America
HBCU: historically black colleges and universities
MHEC: Maryland Higher Education Commission
TWI: traditionally white institution

Note: The exhibit includes only public four-year institutions that offered remedial courses in 2010-2011 and includes only first-time students. It is an unduplicated count of students needing remediation in math, English, or reading. The average is weighted. Excludes University of Maryland University College. TWI remediation excludes Salisbury University and the University of Baltimore.

Source: Complete College America; Maryland Higher Education Commission

Remedial Education at Community Colleges

Maryland's 15 local community colleges and 1 State-operated community college – Baltimore City Community College (BCCC) – are open access institutions, so all offer remedial programs beyond just coursework such as skills laboratories, learning centers, and tutoring. Although practices and instances of remedial education vary widely among public four-year institutions, every community college in the State offers remedial courses, programs, and other remedial activities. Since 1999, every community college has used the same placement exams and methods.

Exhibit 10 shows the same two remedial education sources for community colleges. Using CCA again, the percentage of students enrolling in remedial courses ranges from a high of 80.0% at BCCC to a low of 44.7% at the College of Southern Maryland. The average for all community colleges is 63.1%, which is more than twice as high as the four-year sector's rate and 50.0% greater than the sector's national rate shown in Exhibit 1. However, for community colleges, many of the remediation rates in the survey are lower than those in the MHEC *Data Book*. In fact, half the community colleges' rates differ by 10 percentage points or more, and Cecil College by just over 30 percentage points. Several of the colleges, such as Frederick Community College and the College of Southern Maryland, have remediation rates significantly lower than some of the public four-year colleges and universities shown in Exhibit 9.

Exhibit 10
Students Enrolling in Remedial Courses at Community Colleges
2010-2011 Academic Year

	MHEC *Data Book*	CCA Survey	Difference of *Data Book* Survey
Allegany College of Maryland	86.4%	63.1%	23.3%
Anne Arundel Community College	64.8%	65.5%	-0.7%
Baltimore City Community College	96.5%	80.0%	16.5%
Carroll Community College	81.6%	73.8%	7.8%
Cecil College	77.4%	47.2%	30.2%
Chesapeake College	72.0%	74.2%	-2.2%
College of Southern Maryland	49.3%	44.7%	4.6%
Community College of Baltimore County	83.2%	71.2%	12.0%
Frederick Community College	56.6%	58.4%	-1.8%
Garrett College	86.0%	74.0%	12.0%
Hagerstown Community College	80.7%	70.5%	10.2%
Harford Community College	58.9%	65.2%	-6.3%
Howard Community College	65.6%	60.4%	5.2%
Montgomery College – All Campuses	66.2%	55.0%	11.2%
Prince George's Community College	80.3%	68.4%	11.9%
Wor-Wic Community College	85.7%	79.8%	5.9%
Community College Average	71.1%		

CCA: Complete College America
MHEC: Maryland Higher Education Commission

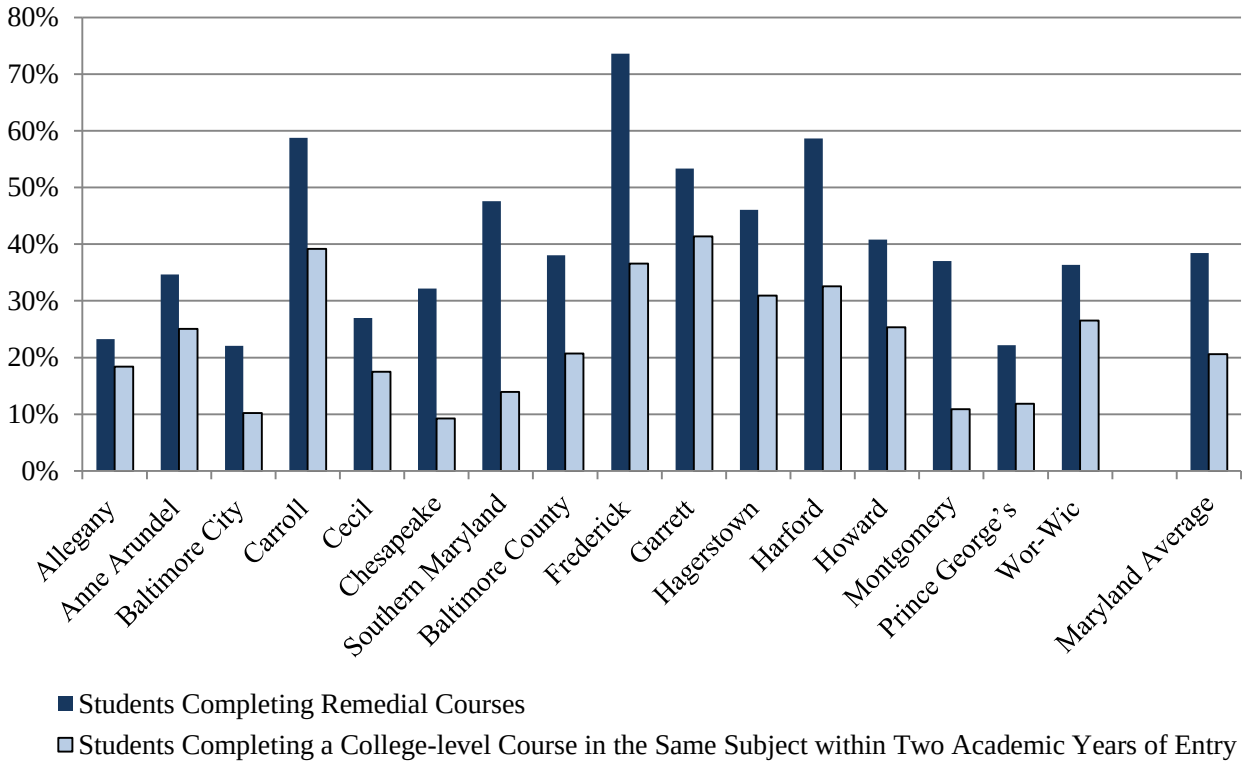
Note: The exhibit includes only first-time students. It is an unduplicated count of students needing remediation in math, English, or reading. The average is a weighted.

Source: Complete College America; Maryland Higher Education Commission

Course Outcomes at Community Colleges

Given the higher need for remediation at community colleges, it is worth looking at how well this sector gets students through remediation. As shown in **Exhibit 11**, despite having a high need for developmental classes, BCCC has the lowest rate of students successfully completing such classes, 22.1% in academic year 2010-2011. At the other end of the spectrum, Frederick Community College reported 73.6% of students completing remedial education. One concern raised by MHEC is the lack of throughput completion, or the number of students who enroll in a college-level course in the same subject as the developmental class within two years of entry. Of the students who complete developmental education, many lose the benefit of catching up by never enrolling in college-level classes. Exhibit 11 confirms this concern, showing that, on average, less than one quarter of students go on to complete further classes in mathematics and English. Frederick Community College again leads the State with 63.3% of students completing college-level work, while only 9.2% do the same at Chesapeake College.

Exhibit 11
Remedial Completion Rates
Academic Year 2010-2011



Note: All data is based on unduplicated student headcounts.

Source: Maryland Higher Education Commission

As shown in the prior two exhibits, it is worth exploring BCCC in greater detail, as it is the institution with the highest remediation need in the MHEC data. For three semesters in 2013 and 2014, the Board of Trustees of BCCC reviewed reasons for course failures and in what classes poor grades were concentrated in. **Exhibit 12** shows the 8 classes that were in the top 10 most failed courses over the past three semesters for which data is available. Like most other institutions, a student must receive a grade C or better to pass a class.

Exhibit 12
Least Passed Classes at BCCC
Spring 2013 to Spring 2014 Semesters

Course Hours	Subject	Course Number	2013 Spring	Fall	2014 Spring	Total Failures	Lost Hours	Lost Tuition
			Failure Rates					
3	REng	91	50%	45%	45%	476	1,428	$142,800
3	REng	92	39%	37%	42%	525	1,575	157,500
3	RMath	80	49%	46%	55%	685	2,055	205,500
5	RMath	91	48%	48%	54%	680	3,400	340,000
4	RMath	92	44%	49%	42%	588	2,352	235,200
2	CLT	100	37%	34%	33%	417	834	83,400
1	PRE	100	31%	23%	27%	729	729	72,900
3	English	101	27%	19%	32%	460	1,380	138,000
Total Not Passing			**1,549**	**1,577**	**1,434**	**4,560**	**13,753**	**$1,375,300**

BCCC: Baltimore City Community College
CLT: Computer Literacy
Pre: Preparation for Academic Achievement
REng: Remedial English
RMath: Remedial Math

Source: Baltimore City Community College

All five developmental English and math courses appear on this list, along with the gateway English course. Also appearing are the required computer literacy course and college skills course. Together, these eight classes accounted for nearly half of all F grades during this time period at BCCC. This totals nearly 14,000 lost credit hours of work and $1.4 million spent on tuition and fees. BCCC reports that about half of all F grades are given for students who drop out or do not return assignments, as opposed to performance on exams or academic dishonesty. Exhibit 12 also illustrates how long it takes to complete the remedial pipeline. At BCCC, a student placed in the lowest math course, MATH 80, must complete 12 hours of remedial math and up to 6 hours of remedial English, plus the computer literacy and study skills preparatory course (another 3 hours).

This means a student faces up to 21 hours of college preparatory classes, and even then, as will be discussed, many do not pass English 101.

The Secretary, Chancellor, and Presidents should comment on whether this type of reporting is a useful best practice for community colleges and four-year institutions.

The Costs of Remediation

The lost tuition revenue exemplified in Exhibit 12 raises issues about who pays for remedial education and how. For low-income students, the biggest federal financial aid program is the Pell grant for low-income students. Current regulations allow Pell funding to cover up to the equivalent of one year of remedial coursework (30 credits), if the student is in an accredited degree-seeking program. ESOL courses do not count against this cap as, in general, ESOL courses are not considered remedial classes for federal financial aid purposes. Pell grants are the only form of federal Title IV aid eligible for ESOL programs.

Prior to the fall 2012 semester, the federal government allowed federal Title IV financial aid programs to disburse aid to any student who could demonstrate an "ability to benefit" or successfully complete six college credits. This enabled about 80,000 high school dropouts nationwide to enroll in community colleges. Today, however, a high school diploma or equivalent is required for a Pell grant or federal loan. Potential students who lack a high school diploma are often unemployed or underemployed and could significantly benefit from higher education. This has increased pressure on Adult Basic Education (ABE) programs, which serve students who are assessed as needing the most remediation. It may have also priced out students from taking remedial education at open admissions institutions or forced students to pursue private loans to finance coursework.

The Secretary should comment on changes in ABE participation since the 2012 changes to federal policy and whether the Maryland Longitudinal Data System (MLDS) should report outcomes of ABE students in higher education versus other types of students.

Additionally, since fall 2011, students may only receive federal financial aid to retake a passed course once – that is, a student may only attempt to improve a grade D once (two total attempts). Subsequent attempts must be financed through other means and those credits do not count toward full-time status for receiving a Pell grant. This retake policy does include ESOL classes. Students are, however, allowed to repeat a course until a grade D or higher is obtained until the lifetime credit eligibility for federal financial aid is reached. This is 2 semesters of remedial education out of 12 semesters total of all college coursework. This means students may use up a significant portion of their federal aid on remedial coursework.

Achieving these grade milestones is important because a student must make Satisfactory Academic Progress (SAP) to receive federal aid. SAP determines the minimum grade point average a student must maintain and if a student is on-track in a degree program. SAP policies are determined by an institution and individual variations greatly alter student outcomes. For example,

Montgomery College only does SAP review once a year, whereas Hagerstown Community College does it twice a year, meaning students at the edge of disqualification are reviewed twice as often and are more likely to be put on academic probation or barred from re-enrolling.

The Secretary and Presidents should comment on whether a common SAP policy among two-year institutions would benefit students. Also, the Secretary should comment on whether MHEC has data on remedial outcomes for students receiving State financial aid.

Finally, at the request of the General Assembly, MHEC conducted a cost study of remedial education in fiscal 2011. That report found community colleges spend over $7,000 per remedial student for a total of $75.3 million. The State directly supports remedial courses taken at the community colleges through the statutory funding formulas. Meanwhile, University System of Maryland (USM) institutions spent over $9,000 per student for a total of $14.0 million on remedial education. There was considerable disagreement as to the appropriate methodology for costing out developmental education between MHEC and the institutions. Morgan State University (MSU), for example, used its own method to estimate it spent almost $16,000 per remedial student.

The Secretary should comment on whether it would be beneficial to have MHEC reexamine public institution financing of remedial education expenditures.

Best Practices in Maryland

Given the scope of the challenge of remedial needs, numerous strategies have been proposed such as tutoring, which can be done face to face, online, or imbedded with a class, as well as learning communities, supplemental instruction, course modules, early intervention programs, college readiness programs, and summer bridges between high school and college.

Course Redesign Across Sectors

Fourteen community colleges, five USM institutions, and MSU are redesigning certain introductory classes to improve student outcomes. Due to grant requirements from CCA and the Lumina Foundation, most of the focus has been on math, although several English courses have been reworked. In the first round of redesign, both the professors and students are adapting to the new pedagogy. Although USM states course redesign is never truly done, USM will gather several years of data before embarking on more systemwide changes. In the near future, USM would like to see redesign spread to other large introductory programs like psychology and art.

Maryland received two major grants that were aimed at helping the State to reach its 55% degree completion goal. The first major grant was Growing by Degrees, a Lumina Foundation for Education grant, for which states apply for funding to demonstrate innovative higher education practices. Maryland was one of seven recipients and received over $1 million.

Growing by Degrees has funded 17 subgrants, most valued at $20,000 with matching funds provided by recipient institutions. Recipients include community colleges, four-year public institutions, and private, nonprofit colleges for a variety of courses, but most subgrants involve science or math. Specifically, 5 of the subgrants support the redesign of basic arithmetic or algebra. The first round of subgrants was awarded in fall 2010 with redesign developed during the 2010-2011 academic year. The new courses were piloted during the fall 2011 semester and were fully implemented by the spring 2012 semester. The second round of subgrants was awarded in fall 2011 and followed a schedule which was delayed by one year, with a pilot in fall 2012 and implementation in spring 2013.

The second major grant Maryland received was a $1 million grant in fiscal 2012 from CCA to fund two programs targeted toward increasing the number of Maryland residents with a college degree. Approximately $0.6 million went toward developmental math course redesign at community colleges and historically black colleges and universities, while the remaining funding went to awarding associate's degrees to transfer students who have satisfied all two-year degree requirements, a process called reverse transfer.

The course redesign portion provided subgrants to 12 community colleges, MSU, and CSU to redesign 32 courses, as well as recruit and train six Course Redesign Fellows. The subgrants focused on developmental algebra and trigonometry and provided a maximum of $30,000 per redesigned course. The redesigned courses are computer laboratory based and feature modular designs so that students can test out of certain lessons to accelerate course completion. Classes vary in length to facilitate concurrent enrollment with credit-bearing math classes. Several pilot redesign classes were held in the fall 2012 semester and by the spring 2013 semester, about 10,300 students enrolled in redesigned math classes, which was approximately one-third of all developmental math students at the participating institutions.

Exhibit 13 shows outcomes of the redesign efforts. MHEC looked at institutional self-reported data on student participants in the redesigned spring 2013 classes versus historical data which indicated that 18 of 21 classes, for which data is readily available and comparable, noted significant student improvement. The classes had pass rates, usually a C or better, ranging from 26% to 100%. Wor-Wic Community College, which achieved a 100% pass rate in one of its redesigned classes, was also one of two institutions that redesigned all of its developmental math courses. Additionally, redesign efforts at the Community College of Baltimore County (CCBC), Harford Community College, Anne Arundel Community College, and Cecil Community College all showed gains of about 30 percentage points, representing marked gains in student performance. MHEC has a JCR, originally due in December 2014, forthcoming on how course redesign will be sustained at community colleges given the impressive outcomes shown in Exhibit 13.

Exhibit 13
Pass Rates for Redesigned and Traditional Developmental Math Classes
Historical Data and Spring 2013

Institution of Course Redesign	Traditional Course	Redesigned Course	Performance Change
Anne Arundel – Intermediate and College Algebra	50%	81%	31%
Baltimore City – Elementary and Intermediate Algebra	56%	72%	16%
Baltimore – Algebra for Liberal Arts Majors	53%	86%	33%
Baltimore – Algebra and Trigonometry	69%	80%	11%
Cecil – Intermediate Algebra	54%	82%	28%
Garrett – Algebra with Geometry	68%	70%	2%
Hagerstown – Elementary Algebra	53%	63%	10%
Hagerstown – Intermediate Algebra	66%	70%	4%
Harford – Fundamentals of Math	45%	77%	32%
Harford – Introduction to Algebra	46%	55%	9%
Harford – Intermediate Algebra	48%	50%	2%
Howard – Basic Algebra and Geometry	51%	59%	8%
Howard – Elementary Algebra	57%	55%	-2%
Howard – Intermediate Algebra	55%	43%	-12%
Morgan – Foundational Math/College Algebra	45%	47%	2%
Prince George's – Pre-Algebra	29%	41%	12%
Prince George's – Introduction to Algebra	30%	41%	11%
Prince George's – Intermediate Algebra	32%	26%	-6%
Wor-Wic – Pre-algebra	84%	92%	8%
Wor-Wic – Elementary Algebra	75%	83%	8%
Wor-Wic – Intermediate Algebra	93%	100%	7%

Note: Due to difficulty in directly comparing reported outcomes, some institutions' results are excluded from this exhibit.

Source: Maryland Higher Education Commission

As one of the alliance of states working with CCA, Maryland is collecting data and annually reporting on certain outcome and progression metrics that measure student progress toward degree completion (although the required 2013-2014 data has not yet been reported to the Department of Legislative Services). Examples of some of the metrics are the annual number and percentage of degrees and certificates; time and credits to degree; enrollment in remedial education; success beyond remedial education; success in first-year college courses; credit accumulation; retention rates; and course completion. This data can help measure lower division undergraduate success.

The Secretary should comment on the continued collection of this data, what it may be able to tell us, and when the most recent data will be available.

Corequisite Learning at the Community College of Baltimore County's Accelerated Learning Pathways

While the grants mentioned above are top-down programs driven by State and national goals, there are many bottom-up strategies worth considering. Although CCA recommends corequisite remediation, which is taking the credit bearing class and the remedial class in parallel rather than in sequence, it did not provide funding to Maryland to implement it. However, one Maryland institution has achieved notable success with this approach.

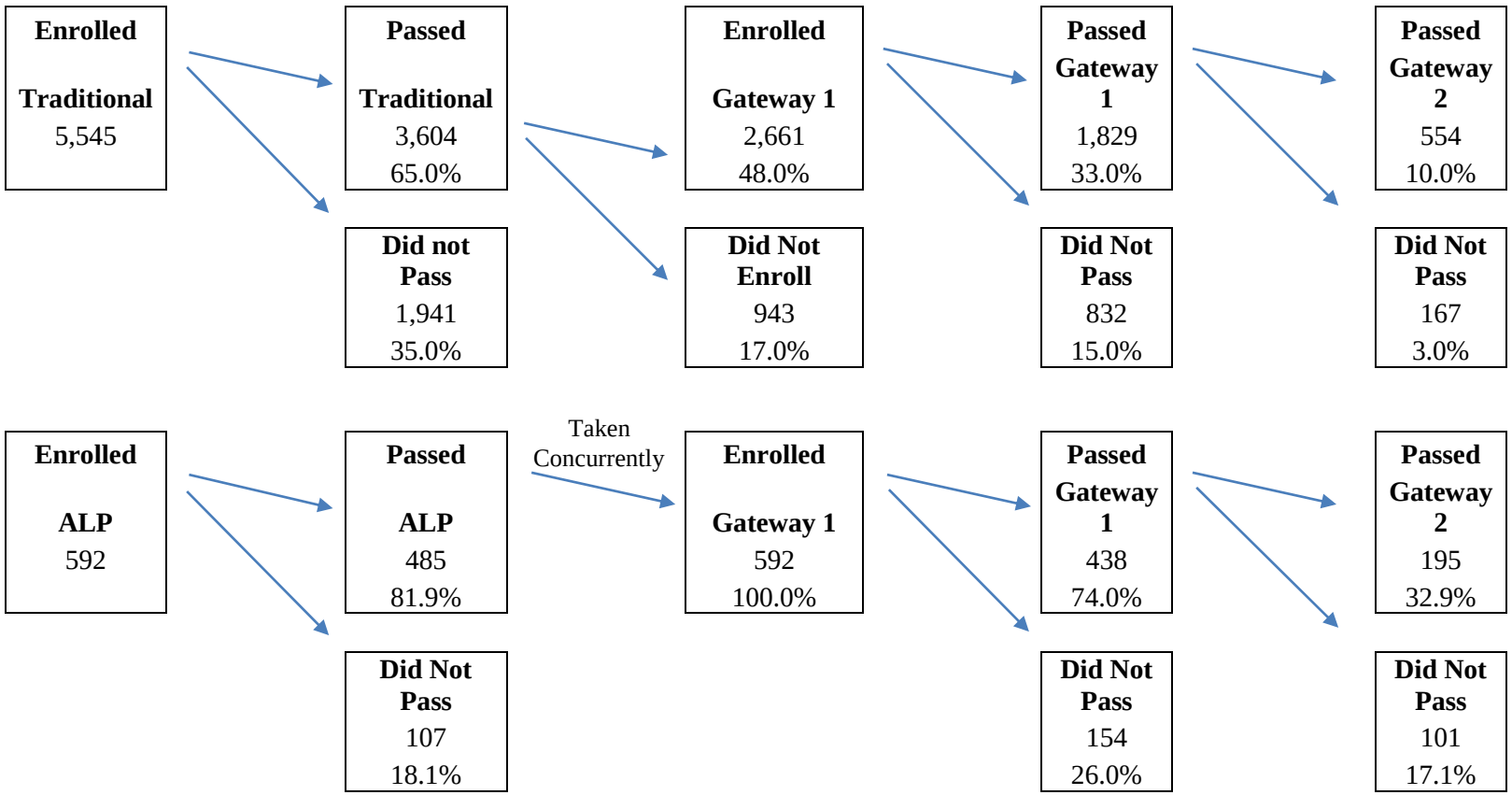
In 2007, CCBC began Accelerated Learning Pathway (ALP), a corequisite developmental writing program. Students who just miss the cutoff score for gateway English are mainstreamed into the gateway English course, English 101 (3 credits), and an academic support course, English 052 (3 credits), which immediately follows the regular class. Students benefit from interacting with the gateway students, which helps to combat the stigma of being enrolled in remedial education.

Exhibit 14 shows the ALP framework compared to the traditional English enrollment path. At every step in the process, ALP outperforms the traditional class. For example, almost 82% passed ALP versus 65% in the normal class. The biggest difference comes in the throughput completion rate: 74% of ALP students completed the gateway English course versus 33% for regular students.

Exhibit 14

English Remediation Pipeline

Community College of Baltimore County
Fall 2007 – Fall 2010



ALP: Accelerated Learning Pathway

Source: Community College of Baltimore County

Earning credits represent important milestones in degree attainment. **Exhibit 15** shows the credit accumulation of ALP students versus traditional students. Over the three academic years of data, ALP students were consistently twice as likely to attain 12 credits in the first year and 24 credits by the end of the second year. This represents a very large increase in outcomes for CCBC students needing English remediation.

Exhibit 15
English Credit Accumulation of Successful Students
Community College of Baltimore County

	2010	2011	2012	Total
Traditional				
Original Enrollment	1,328	1,044	880	3,252
12 credits in One Year	169	141	124	434
%	13%	14%	14%	13%
24 credits in Two Years	172	147	138	457
%	13%	14%	16%	14%
Accelerated Learning Pathway (ALP)				
Original Enrollment	288	550	590	1,428
12 credits in One Year	80	136	160	376
%	28%	25%	27%	26%
24 credits in Two Years	94	177	219	490
%	33%	32%	37%	34%
Total	**1,616**	**1,594**	**1,470**	**4,680**

Source: Community College of Baltimore County

One criticism of innovative reforms in education is that results are difficult to replicate at other institutions. However, a study from the Center for Applied Research (CFAR), a group spun off from the University of Pennsylvania, found the ALP to be a highly replicable program across diverse campuses. CFAR reports ALP programs, or modifications, active in 26 states. In a review of student performance from 2010 to 2012 at seven other ALP-adopting campuses, CFAR found significant improvement among the ALP students versus traditional students. Five states, including Virginia, have seen widescale adoption of the ALP. So far in Maryland, Allegany College, where 30% of students place into developmental writing, adopted the ALP in fall 2012.

CCBC had over 1,000 students taking traditional remedial education in fall 2006. After three years, only 37% of the cohort had attempted the first-credit bearing English course and only 27% passed it. About 200 students took ALP writing beginning in fall 2007. Of those, 100%

attempted English 101, and 63% passed with a C or better. CFAR notes many noncognitive challenges for replicating ALP, including transportation to campus, arranging child care, and reaching accommodations with employers, and motivational issues, but many of these issues are challenges community colleges are already familiar with.

Aligning K-12 and College Expectations

One of the main reasons for high remediation rates around the country and in Maryland is the lack of alignment between the expectations for students in elementary and secondary schools and what is needed to be successful in higher education. Despite more than doubling State education aid since implementation of the Bridge to Excellence in Public Schools Act of 2002 (also known as Thornton) to over $6 billion, Maryland's current requirements for high school graduation are 9th-10th grade content in English 10 and Algebra I as well as Biology and Government.

In an effort to address this misalignment, the Common Core State Standards (CCSS) were developed through a state-level initiative coordinated by the National Governors Association and the Council of Chief State School Officers, in collaboration with education stakeholders from across the country to eliminate the wide variation in knowledge and skill expectations in English language arts and mathematics across the states. Maryland was one of the first states to adopt these standards in June 2010, and has since worked to design a new state curriculum, the Maryland College- and Career-Ready Standards (MCCRS). MCCRS align with CCSS and reflect college and workplace expectations. Beginning with the 2013-2014 school year, MCCRS was fully implemented in Maryland schools.

As a result of the new curriculum, Maryland also required a new assessment system. In 2010, Maryland joined the Partnership for Assessment of Readiness for College and Careers (PARCC), a consortium of 12 states (as of February 2015) working to develop a common set of assessments in English language arts and mathematics aligned to CCSS and, in turn, to MCCRS. PARCC measures student progress and tracks status on a trajectory toward college and career readiness. The PARCC assessments will be given to all public school students in Maryland for the first time in the 2014-2015 school year. Maryland's results along with the other 11 states will be used by the PARCC consortium states to jointly determine cutoff scores in English/literacy and math that will demonstrate that a student is college and career ready. (Individual states will set high school graduation requirements separately.) Students who achieve this level of proficiency will be able to take credit-bearing college courses at public higher education institutions in the PARCC states with no required remedial education. (However, the institutions may still administer placement tests to determine the appropriate course level for students.) This determination is expected to take place in summer 2015.

A 2011 JCR required community colleges and USM to report on how colleges worked with LEAs to identify students who were not college ready. The final report detailed the hodgepodge of agreements and collaborations between higher education and the K-12 system. While some institutions had strong ties to high schools, other did not, which created a very uneven playing field for high school students.

Comprehensive legislation was enacted in 2013 to further the education alignment goal and to better prepare Maryland students for college and careers. The College and Career Readiness and College Completion Act (CCRCCA) of 2013 (Chapter 533) codified the State goal that at least 55% of the State's residents age 25 to 64 will hold at least an associate's degree by 2025 and made many policy changes intended to move the State toward this goal. The preparation of students to succeed in college and career includes, among other things, the alignment of curricular requirements in high school with college and career expectations, including requiring four years of mathematics; requiring public institutions to establish degree pathways for all students; requiring students taking remedial courses to take the credit-bearing course upon completing the remedial course; and the facilitation of credit transfer between community colleges and four-year institutions of higher education. The Act charged the P-20 Council with ensuring that the college and career readiness and college completion strategies contained in the Act are implemented. The council was required to report on the implementation of the strategies by December 1, 2014, and every two years thereafter; however, to date, no report has been submitted.

As part of aligning the curricular requirements of high school with college and career expectations, beginning with the 2015-2016 school year, all students must be assessed using acceptable college placement cut scores no later than grade 11 to determine whether they are college and career ready specifically relating to English language arts literacy, and mathematics. By the 2016-2017 school year, transition courses or other instructional opportunities must be delivered to students in grade 12 who have been found *not* to be college and career ready. However, a transition course may not fulfill the mathematics requirement to the exclusion of other credit-bearing courses that are required for graduation. The exact content and structure of these courses has not yet been determined.

The State Superintendent should discuss the upcoming college- and college-ready cutoff score process and the timeline and extent to which Maryland's high school graduation expectations will be aligned with college and career expectations. The State Superintendent should also discuss the plans for transition courses.

Quantitative Literacy Standards

While USM does not have any broad policies directly relating to remedial education, it did address some admissions concerns. Beginning with 9th graders in fall 2011, USM expects all admitted students to have four years of math in high school, including a full year in the senior year. USM noted that nontrivial algebra is intended to mean that the level of mathematical concepts discussed and the level of problems that are used in the course would be at least as sophisticated as those that relate to problems appearing in the Achieve ADP Algebra II test. Incoming students in fall 2015 are the first cohort with this requirement. USM does have a policy that an institution may opt to admit up to 15% of cohorts missing this math factor. USM believes this will encourage students to enter science, technology, engineering, and math (STEM) fields, a goal of the current State plan, as well as address the "use it or lose it" problem in retaining math skills.

Per the CCRCCA, beginning with the 9th grade class of 2014 (*i.e.*, began 9th grade in fall 2014), each student is required to enroll in a mathematics course during each year of high

school. These courses may include math-related career and technology program courses or credit-bearing mathematics transition courses. It is the State's goal that all students achieve mathematics competency in at least Algebra II by graduation.

Most school districts in Maryland place the majority of students in Algebra I in 9th grade, followed by geometry, and Algebra II. However, according to the Maryland State Department of Education (MSDE), about 30% of high schoolers do not take Algebra II. Thus, Algebra II may be a critical barrier for many students to pursue higher education. The Dana Center at the University of Texas, Austin highlights the actual mathematical skills needed for students' success in respective fields. As shown in **Exhibit 16**, most students do not enroll in math beyond the gateway level, which is typically Algebra II. The Dana Center has suggested increased access and comparable credit for workforce needs like statistics and probability. For example, nurses must have a thorough understanding of statistics to understand and report on health care needs but rarely use advanced algebra skills on the job.

Exhibit 16
Enrollment in Mathematics Courses

	Two-year Institutions				Four-year Institutions			
	1995	**2000**	**2005**	**2010**	**1995**	**2000**	**2005**	**2010**
Precollege	58%	60%	61%	61%	15%	14%	13%	11%
Gateway Level	21%	22%	20%	20%	42%	45%	44%	44%
Calculus	9%	8%	7%	7%	37%	35%	37%	38%
Advanced					7%	6%	7%	8%
Other	12%	10%	12%	12%				
Total Enrollment (in Thousands)	**1,384**	**1,273**	**1,580**	**1,887**	**1,469**	**1,614**	**1,607**	**1,971**

Source: Conference Board of the Mathematical Sciences Survey 2010 Report, Table S.2

To address the different quantitative skills necessary for different degree programs and careers, the Carnegie Foundation, the same group that created the college credit hour, has proposed a Pathways model consisting of Statway and Quantway. The Pathways model accelerates student progress through developmental mathematics sequences and onward to college-level courses for credit. Carnegie defines the two Pathways as:

- **Quantway** – focuses on quantitative reasoning that fulfills developmental requirements with the aim of preparing students for success in college-level mathematics. The goal is to promote success in community college mathematics and to develop quantitatively literate students.

- **Statway** – focuses on statistics, data analysis, and causal reasoning, combining college-level statistics with developmental math. It is designed to teach mathematics skills that are essential for a growing number of occupations and are needed for decisionmaking under conditions of uncertainty.

While Maryland is not a part of this network, 7 of Maryland's 10 competitor states participate in Carnegie's Pathways Improvement Communities network and are using some form of the Pathways Model at two- and four-year institutions: California, Massachusetts, Minnesota, New Jersey, New York, Ohio, and Washington. Since 2011, Carnegie has supported this network through online resources and professional advising.

In December 2014, the USM Chancellor, the Maryland Association of Community Colleges (MACC) director, and the State Superintendent of Schools became co-leaders of the Maryland Mathematics Reform Initiative (MMRI). The primary goal of the MMRI is to align gateway math course sequences with academic programs of study. The examination of what may be necessary for students to achieve the quantitative literacy and reasoning knowledge in their chosen area of study, and whether or not Algebra II will be required for some students to adequately prepare for their major will be part of the consideration. The work will also need to consider how this will impact alignment with the newly adopted Maryland College- and Career-Ready Standards. Recommendations from the MMRI are expected by summer 2015. If math sequencing is modified, the placement into and need for remedial math could dramatically change. This may open up discussion on pathway models for degrees beginning in middle or high school.

The Chancellor, MACC, and the State Superintendent should comment on the progress of MMRI and how it will align or complement the definition of college and career ready to be established by the PARCC consortium, which will also take place this summer.

Maryland Longitudinal Data System

Maryland has developed a comprehensive statewide longitudinal data system that will allow the effective management and analysis of individual student data, within federal and State data privacy and security laws, as well as the examination of student progress and outcomes over time, including preparation for postsecondary education. Prior to the creation of a statewide longitudinal data system, Maryland's three data systems for primary and secondary education data, higher education data, and workforce data could not be linked together in a cohesive way.

Chapter 190 of 2010 required MSDE; MHEC; USM; MSU; SMCM; and the Department of Labor, Licensing, and Regulation to jointly establish the MLDS, which became fully operational by December 31, 2014. The primary purpose of the data system is to facilitate and enable the linkage of student data and workforce data as well as generate timely and accurate information about student performance that can be used to improve the State's education system and guide decisionmakers at all levels. Queries the MLDS can address include:

- Why is there a higher need for remediation in Maryland than competitor states?

- How likely are students placed in developmental courses to persist in postsecondary education and transfer and/or graduate?

The Secretary, Chancellor, Presidents, and the MLDS Director should comment on what new research questions the MLDS is capable of answering in the field of remedial education and when the MLDS could report back to the General Assembly on these questions.

Next Steps

CCRCCA is comprehensive legislation that requires public secondary and higher education institutions to adopt a number of best practices to improve student preparation and success in college. While many of the best practices suggested by experts are in CCRCCA and/or are being implemented by Maryland's higher education institutions, one of the challenges for Maryland is to implement these policies in a timely and effective manner. Further questions for discussion include:

- Why are Maryland's remediation rates higher than other states?

- Should computerized exams, like Accuplacer, remain the default placement tool?

- If so, should public four-year institutions have standardized cutoff scores for placement exams?

- What type of instructor should teach remedial education coursework that is not at the college level?

- When will institutions know if the increased pass rates in redesigned remedial courses end up generating higher graduation rates?

- Should high school transition courses be taught at (or by) community colleges?

- Should institutions charge full tuition for noncredit-bearing classes? The University of Maryland University College (UMUC) does not charge for additional academic support for developmental students. Can this practice be expanded?

- Should students be encouraged to take remedial courses through more affordable institutions like community colleges or UMUC?

- Likewise, should public four-year institutions be prohibited from offering remedial courses? (Virginia requires four-year institutions to partner with two-year institutions for the delivery of remedial education.)

- Finally, should Maryland institutions use a common, comprehensive remedial strategy to standardize education methods or redesigned courses? (Virginia's 23 community colleges are shifting to a standardized set of mathematics teaching methods across all campuses.)