

2010 Progress
Implementation & Reporting
of
Cohort Graduation Rate

Report to the Maryland General Assembly
and Governor Martin O'Malley

Submitted by

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2010 Progress: Implementation & Reporting of Cohort Graduation Rate

Maryland Annotated Code 7-203.2 calls for the Maryland State Department of Education (MSDE) to implement a statewide data management and reporting system for the purpose of reporting an accurate adjusted cohort graduation rate for the 2011 graduating class. The law outlines specific requirements for collecting, maintaining, analyzing, and reporting on graduation rate data. Until 2011, MSDE is required to annually post aggregated and disaggregated interim graduation rates and report each fall to the Governor and the General Assembly regarding progress toward full implementation of the requirements identified in the law.

For the graduating class of 2010, MSDE has met reporting requirements by posting online the adjusted four-year cohort rate as well as the Leaver Rate data, thus meeting both federal and State reporting requirements.

Background

Education policy makers in Maryland and across the nation have altered the conversation about high school programs, and particularly about graduation in recent years. Nationally, analysts have focused more intensely on making high school programs more effective and on improving the ability of graduates to succeed both in post high school education and in the workforce. Further, a great deal of interest has been generated in the four-year cohort rate because of the sense that students should graduate “on time” and prepared to meet real world challenges. The strength of the existing graduation rate accountability calculations is their longevity and their ease of computation. Consequently, long-term patterns could be examined, and results could be compared among schools and across the many states using the same computations. However, the lack of complete universality made some comparisons between similar schools, districts, and states challenging at best. An interest has grown in standardizing published rates so that even more meaningful analyses can be conducted.

Past Practices. In the past, most states, like Maryland, lacked a longitudinal data system that permitted the tracking of students from enrollment in pre-K through high school. At the same time, a handful of states had begun work on data systems that would link student records pre-K through graduation with higher education records. The implementation of such comprehensive data systems enables states for the first time to track students entering high school all the way to graduation. While this seems a straightforward task, it is complicated by the fact that not all students enter high school and matriculate through high school to graduation in four years. Rather, student transfers, dropouts, and student graduation programs taking three, five, or more years take up a significant portion of the graduation class. Until verified individual student records were available that tracked every step through high school, graduation statistics were calculated based on the number of entrants versus graduates.

Widespread agreement among education analysts over the years resulted in several graduation calculations that could be collected consistently across states and schools using several verifiable components, including enrollments, dropouts, transfers, and graduates. The Leaver Rate, so-named because it compared the number of students leaving high school with their diploma versus the number of ninth grade entrants four years earlier, minus dropouts. The Leaver Rate has been

used in Maryland and many other states for decades and complies with a graduation rate definition set by the National Council for Education Statistics more than two decades ago.

Evolving Technology Systems and Policy. The United States Department of Education (USDE) re-entered the graduation rate debate in 2009 with a requirement, under the Elementary and Secondary Education Act, that states begin reporting in 2012 graduation rates based on the individual student data collected with statewide longitudinal data systems. Maryland will be able to meet federal reporting and accountability requirements a year earlier, with the class of 2011, but MSDE is finding that the information collected for the students graduating in spring 2010 is nearly as complete. Data for the class of 2010 from the sophomore through senior years of high school comes directly from the statewide longitudinal data system, with freshman year (2006-07) data the only data set that must be reconstructed to complete the graduation rate collection. This single year of reconstructed data was necessary because Maryland did not begin assigning unique student identifiers until fall 2007.

Each year, Maryland has been able to enhance the data sets that contribute to the various measures of graduation rates, and in 2010 has the most complete picture to date of school, system, and State graduation rates. MSDE has made so much progress that the agency is even more confident in reporting the four-year cohort graduation rate data in lieu of the interim rate suggested in the Maryland law. This development means that for 2010, MSDE is primarily looking at the ongoing data sets for students entering Grade 9 for the first time in the 2006-2007 school year, a group for which MSDE is most confident to date in the veracity of the reported data.

Maryland's 2010 Reported Data. The adjusted cohort graduation rate reported by Maryland in 2010 is based on the reconstruction of 2006-2007 school year student data for those students who entered Grade 9 for the first time in the 2006-2007 school year. While the existing controls over the data for this cohort are enhanced over the previous year, it will take one more data collection cycle—this time for the students beginning Grade 9 in 2007-2008—to have full confidence in the data without the need for reconstruction of data from past record files. Under federal regulations, the four-year data for the class of 2010 cannot be used for accountability purposes, as MSDE must have four full years of longitudinal data linked through a unique student identifier. Further, federal rules allow states to build more realistic accountability measures for graduation rate that credit schools for students graduating on time (at least in four years) as well as students taking longer.

Maryland's 2011 Reported Data. Maryland assigned unique student identification numbers to the students entering Grade 9 in the 2007-2008 school year. This means that the 2011 graduation cohort will be the first one for which students will be followed all four years of high school using the statewide longitudinal student data system. As a result, the 2011 reporting cycle will be the first time it will be permissible for Maryland to use the adjusted cohort graduation rate for accountability purposes. MSDE continues to work with USDE to determine the final calculations so that the adjusted cohort rate can be incorporated into computations for accountability purposes in 2011.

A statewide process is in place to ensure an accurate cohort rate based on tracking students using unique student IDs. This process assures consistency across the state for all schools and school

systems and will be reported in 2011. Because unique student identifiers have been assigned to students, enrollment and assessment data can already be linked to these identifiers. MSDE has applied for and received grant funds to support the linking of the data and the development of the longitudinal database and related data systems necessary to meet the reporting requirements.

When Maryland is able to report a cohort rate based on four full years of longitudinal data in 2011, the State will continue to use the current National Center for Education Statistics (NCES) Leaver Rate for Adequate Yearly Progress (AYP) requirements under No Child Left Behind (NCLB), but only for reporting purposes. The State plans to continue calculating and publishing graduation results on the website using the Leaver Rate as well as the three-, four-, and five-year cohort rates in the future, beginning in 2010 and forward. This multifaceted view of high school graduation patterns helps analysts access both the historical trend data that the Leaver Rate provides and the insights afforded by the cohort calculations. Further, MSDE will juxtaposition this information with dropout and promotion rate and other historical data for context.

2012 Federal Graduation Rate Accountability Rules. Guidance from USDE requires states and local school systems to report a four-year adjusted cohort graduation rate, disaggregated by subgroups at the school, system, and State levels, beginning in 2011 and to use that rate in making AYP determinations in 2012. The change in federal measures will require Maryland to set new graduation rate standards and targets. New standards based on the 2010 cohort rate data will be set in spring 2011 for the purpose of identifying annual targets and the Graduation Goal for schools, school systems, and the State.

2010 Data

MSDE has collected, validated and reported cohort graduation rates for the class of 2010.

2010 Data Reporting Requirements

MSDE has posted the adjusted cohort graduation rates for the State and local school systems on its Report Card website (<http://www.mdreportcard.org>). At the State and local school system level, these data are presented in an aggregate form as well as disaggregated by American Indian, African American, Hispanic, White, Asian/Pacific Islander, students who are limited English proficient, students who receive free and reduced priced meals, and students who receive special education services. The report includes the 2010 Leaver Rate as well as the three-, four-, and five-year adjusted cohort rates. The report also includes additional related information such as dropout and promotion rates, Grade 12 Documented Decisions, and High School Program Completion.

Comparisons. Each of the graduation statistics are collected from verifiable data sources, and they are each designed to answer different questions. The NCES Rate (Leaver Rate) used by Maryland gives a good historical view of overall graduation trends in the aggregate and disaggregated by race and special services. The calculation is structured to help data users understand the rate of student graduation, regardless of the length of time in high school. The cohort graduation rates indicate the number of students taking a maximum of three, four, or five years to graduate. None of the cohort calculations capture students taking more than five years to graduate. The cohort graduation rate does capture students who dropped out and re-entered

school, as long as they graduated within five years of entering Grade 9. In contrast, the NCES rate does not credit schools with “recovered” dropouts who re-enter. Further, individual students who drop out multiple times count against the Leaver Rate calculation for multiple dropout incidents, regardless whether the student eventually graduates or not.

Because of the differences in the calculations and the questions each graduation measure answers, the rates will be different. Certainly, the number of students graduating in four years will be smaller than will be the number over four or more years. Disruptions in a student’s high school program through personal or family issues can challenge a student’s ability to complete high school, thus delaying high school completion, in some instances. High school programs in every school system are increasingly responding to the needs of the student experiencing a disrupted education and are working to improve the likelihood that students will persevere until graduation.

Context Information. While the advances in data systems across the nation are permitting states to report and use cohort data to analyze high school participation trends, it is still important to view graduation data information within context, including the annual promotion rates and dropout rates.

Dropout rate indicates how many dropout incidents occurred in grades 9 through 12 during the past academic year (2009-2010). In 2009-2010, 2.50% of students dropped out. This measure represents the total number of dropout *events* versus the total number of students enrolled in the fall of 2009. If a student drops out, re-enrolls, and drops out again, they are recorded twice as a dropout. In the future, MSDE will also publish a cohort dropout rate that shows a cumulative rate of dropouts from a cohort across the four-year high school period.

Promotion rates lend additional insights, but do not identify the rate at which students are leaving school. Rather, these calculations tell the reader what percent of students identified in each high school grade (9, 10, 11, and 12) during the most recent academic year met all the requirements to be promoted to the next grade or graduation. Many of the students not promoted to the next grade remain enrolled and work toward graduation. However, non-promotion is a critical risk factor for many students, raising the likelihood that they will drop out of high school before graduation.

2010 Statewide Data Summary

**Table 1
2010 Maryland Statewide Graduation Rates**

Graduation Measure	Percent All Students Enrolled	Summary of Components of Measure (General description of elements used to compute the graduation measure. Not all technical features represented.)
Leaver Rate (NCES)	86.55	2010 Maryland graduates ÷ 2006-07 Grade 9 entrants + additional entrants through 2010 – dropouts – deaths
5-Year Adjusted Cohort Rate	83.01*	2010 Maryland graduates beginning grade 9 Fall 2005, Fall 2006 or Fall 2007 ÷ 2006-07 Grade 9 entrants + additional entrants through 2010 – dropouts – deaths
4-Year Adjusted Cohort Rate	80.70*	2010 Maryland graduates beginning grade 9 Fall 2006 ÷ 2006-07 Grade 9 entrants + additional entrants through 2010 – dropouts – deaths
3-Year Adjusted Cohort Rate	1.27 * **	2010 Maryland graduates beginning grade 9 Fall 2007 ÷ 2006-07 Grade 9 entrants + additional entrants through 2010 – dropouts – deaths

* No comparable data available from past years. 2010 becomes baseline year.

** Represents a small number of students graduating in fewer than three years. Incorporated into Four-Year and Five-Year Adjusted Cohort Rates.

**Table 2
Ten-Year Trend
Maryland Statewide Graduation Rates (Leaver or NCES Calculation)**

School Year	Percent Graduating	Number of Graduates	Total Number of Students
2010	86.55	59,080	68,261
2009	85.24	58,304	68,403
2008	85.09	59,171	69,542
2007	85.24	57,564	67,528
2006	85.44	55,538	65,006
2005	84.83	54,170	63,860
2004	84.29	52,869	62,723
2003	84.68	51,864	61,250
2002	83.83	50,724	60,507
2001	83.13	49,221	59,208

Table 3
2010 School System Leaver Graduation Rates

School System	Number of Graduates	Total Students	Leaver Graduation Rate
Allegany	658	734	89.65
Anne Arundel	5,114	5,755	88.86
Baltimore County	7,352	8,541	86.08
Calvert	1,376	1,488	92.47
Caroline	378	457	82.71
Carroll	2295	2408	95.31
Cecil	1,137	1,355	83.91
Charles	2,110	2,349	89.83
Dorchester	300	373	80.43
Frederick	3,076	3,253	94.56
Garrett	323	348	92.82
Harford	2,699	3,054	88.38
Howard	3,859	4,092	94.31
Kent	158	195	81.03
Montgomery	10,347	11,495	90.01
Prince George's	8,250	9,772	84.42
Queen Anne's	555	624	88.94
Saint Mary's	1,145	1,289	88.83
Somerset	170	204	83.33
Talbot	370	421	87.89
Washington	1,512	1,635	92.48
Wicomico	949	1,147	82.74
Worcester	526	563	93.43
Baltimore City	4,421	6,709	65.90
All Public Schools	59,080	68,261	86.55

Table 4
2010 School System Four-Year Adjusted Cohort Rates

School System	Number of Graduates	Total Students	Cohort Graduation Rate
Allegany	641	741	86.50
Anne Arundel	4,841	5,904	82.00
Baltimore County	6,918	8,647	80.00
Calvert	1,332	1,463	91.05
Caroline	364	476	76.47
Carroll	2,268	2,511	90.32
Cecil	1,071	1,343	79.75
Charles	1,983	2,347	84.49
Dorchester	295	379	77.84
Frederick	3,012	3,313	90.91
Garrett	321	349	91.98
Harford	2,580	3,046	84.70
Howard	3,742	4,225	88.57
Kent	153	184	83.15
Montgomery	9,729	11,438	85.06
Prince George's	7,669	10,426	73.56
Queen Anne's	546	627	87.08
Saint Mary's	1,062	1,324	80.21
Somerset	165	206	80.10
Talbot	357	411	86.86
Washington	1,447	1,639	88.29
Wicomico	898	1,134	79.19
Worcester	513	569	90.16
Baltimore City	3,911	6,454	60.60
All Public Schools	55,818	69,156	80.71

Table 5
2010 Maryland Dropout Rates

Dropout Measure	All Students	Summary Definition*
Grade 9-12	2.50%	$\frac{\text{The total number of dropout events during the 2009-2010 school year in grades 9-12}}{\text{2009-2010 grades 9-12 enrollment}}$
5-Year Adjusted Cohort	10.55%	$\frac{\text{The total number of individual students in 5-year cohort who dropped out from Fall 2005 to Spring 2010}}{\text{2009-2010 students graduating high school}}$
4-Year Adjusted Cohort	8.25%	$\frac{\text{The total number of individual students in 4-year cohort who dropped out from Fall 2006 to Spring 2010}}{\text{2009-2010 students graduating high school}}$
3-Year Adjusted Cohort	5.06%	$\frac{\text{The total number of individual students in 3-year cohort who dropped out from Fall 2007 to Spring 2010}}{\text{2009-2010 students graduating high school}}$

*Does not represent all technical features used in calculation. Summarized for comparison purposes only.

Table 6
2010 Maryland Promotion Rates

Promotion Measure	All Students	Summary Definition*
Grade 12	93.5%	$\frac{\text{2009-10 seniors promoted to graduation}}{\text{2009-10 seniors enrolled}}$
Grade 11	93.0%	$\frac{\text{2009-2010 juniors promoted to Grade 12}}{\text{2009-2010 juniors enrolled}}$
Grade 10	89.9%	$\frac{\text{2009-2010 sophomores promoted to Grade 12}}{\text{2009-2010 sophomores enrolled}}$
Grade 9	87.0%	$\frac{\text{2009-2010 freshmen promoted to Grade 12}}{\text{2009-2010 freshmen enrolled}}$

*Does not represent all technical features used in calculation. Summarized for comparison purposes only.

Additional Web Resources

The weblink to this information is Maryland Report Card at www.mdreportcard.org. Statewide and local education agency (LEA) graduation rates for 2010 data tables can be found at the website along with disaggregated data.

In addition, graduation rate data calculated for determining Adequate Yearly Progress (AYP) under No Child Left Behind (NCLB) is also available at the same location under “AYP.” Graduation rates and dropout rates are reported by subgroup under the demographics section of the same website.

Appendix A: Definitions and Required Documentation

Definitions

Four-year adjusted cohort graduation rate: As defined in 34 C.F.R. §200.19(b)(1)(i)-(iv), the four-year adjusted cohort graduation rate (hereafter referred to as “the four-year graduation rate”) is the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class. From the beginning of 9th grade, students who are entering that grade for the first time form a cohort that is subsequently “adjusted” by adding any students who transfer into the cohort later during the 9th grade and the next three years and subtracting any students who transfer out, emigrate to another country, or die during that same period.

Graduate: Student receiving a standard high school diploma aligned with the regular high school curriculum.

Non graduates: Students who drop out, or receive a special education certificate. All of these students are included in the denominator of the graduation rate formula below.

Early graduates: Students receiving a standard high school diploma aligned with the regular high school curriculum before completing four full years in high school. These students count as graduates in the four year cohort rate.

Formula

A four-year adjusted cohort for students entering ninth grade for the first time in the fall of 2008 and expected to graduate in the spring of 2012 would be calculated as follows:

Numerator = Number of cohort members who earned a regular high school diploma by the end of the 2011-2012 school year

divided by

Denominator* = Number of first-time ninth graders in fall 2008 (starting cohort), plus students who transfer in, minus students who transfer out, emigrate, or die during school years 2008-09, 2009-10, 2010-11, and 2011-12.

*The denominator includes the following students originally assigned to the cohort: students who receive a Special Education Certificate, students who were retained at any time during high school, students who have dropped out.

The next page outlines the documentation that must be on file at the local school system or school to provide acceptable evidence that a student should be removed from a cohort.

Documentation and Evidence Required by Federal Regulation in Order to Remove a Student From a Cohort

Documenting Students Removed From a Cohort

To remove a student from a cohort, a school or local educational agency (LEA) must confirm in writing that the student:

- Transferred out,
- Emigrated to another country, or
- Is deceased [§200.19(b)(1)(ii)(B)].

Documenting Transfers Out

To confirm that a student transferred out, the school or LEA must have official written documentation that the student enrolled in:

- Another school, or
- An educational program that culminates in the award of a regular high school diploma [§200.19(b)(1)(ii)(B)(1)].

Examples of Official Written Documentation

- Evidence of a transfer that is recorded in a state's data system.
- Request for records from the receiving high school.
- An approved application for home schooling.
- A letter from an official in the receiving high school acknowledging the student's enrollment.

Official documentation of a transfer must be in writing rather than a telephone conversation or other verbal communication with a parent, relative, or neighbor.

Written Confirmation for Students Who Emigrate or Pass Away

- A school or LEA must confirm in writing that a student has emigrated to another country or passed away, but need not obtain official documentation.
- Written confirmation that a student has emigrated to another country might include a school administrator's memo to the student's file based on a phone conversation with a parent, stating that the student is leaving the country.
- Written confirmation that a student has passed away might include an obituary or a letter from a parent.

**Appendix B:
Process for Cohort Determination**

LEA	School Year	Starting Cohort	Dropouts	Transfers In	Transfers Out	Deaths	Diplomas	Adjusted Cohort
All Public Schools	2007	67,253	557	5,385	2,854	11	0	69,773
	2008	69,773	1,317	4,024	4,192	30	11	69,575
	2009	69,575	1,969	3,155	3,303	24	800	69,403
	2010	69,403	1,864	1,610	1,838	19	55,007	69,156

The above data represents the students graduating in the class of 2010, with their first time in ninth grade during the 2006-2007 school year.